Good afternoon.

When I was heading to the airport to fly out last night, the last thing my wife said to me was:

"I know you put a lot of effort into this presentation and that you want to come across as knowledgeable and smart.

That's a lot of unnecessary stress. Just be yourself."

Thanks, Dear.

I have to warn you upfront that I was trained as a lawyer. *So I’m billing my time right now…since breakfast…yesterday.*

Even though I left the practice of law several decades ago, I am thankful for the training, in part because it made me sensitive to how deeply embedded legal issues are in banking and technology. Too embedded.

But for the past 16 years, I’ve been in fintech - growing a concept into a mature fintech company. We started that process well before “fintech” was even a term. And before that, I spent a dozen years in various aspects of banking. You know what all that means? *Yes, I’m as old as I look.*

I meant this session’s title to be a bit provocative—to insure all the fintech representatives attended—and you are here. But it’s not really the right question to focus on, as I’ll get to in a moment.
On the left here is the famous garage where Steve Jobs, Steve Wozniak, and Ronald Wayne founded Apple in 1976. While not a fintech company *per se*, in hindsight, who would refuse to join in on that ride at that stage? Ah, well, Ronald Wayne sold his 10% share in the company back to Jobs and Wozniak just 12 days after the company was formed. For $800.

To the right is a photo of where I work—our firm occupies the top two floors of the building. But we started much smaller—the firm was conceived of in a very small suite of offices sublet from a law firm in Washington, DC. To be sure, we’re no Apple, but you get my point: as a banker, you might feel more comfortable walking into an established office than either a garage or small office suite. But you could be missing out…
Hopefully, we all recognize that banks and other mature organizations need startups, particularly in the fintech space. Why?

One, startups excel at giving birth to new ideas—ideas that aren’t shut down by IT departments worried about security and higher priorities, compliance and legal departments worried about a lack of regulatory guidance, or finance departments and executives worried by the high costs and likelihood of failure.

Two, startups are more likely to take new ideas and turn them into a successful proof of concept. They don't need to fight with other departments for resources. They are singularly focused.

Three, startups are better at finding niche talent. They can assemble a team of people—from many different disciplines—who have spent much of their careers focused around a single issue or problem.

That talent and focus, if successful (and lucky), can eventually result in a mature company capable of partnering with and helping every bank in the country.
Let me correct the title of this presentation right now. The question is not when is a fintech company ready to serve your bank. The real question is this, “Is your bank ready to work with a particular fintech company?” and “Does it have the resources to interact in an appropriate manner?”

What do I mean by “ready to interact in an appropriate way or manner?” Early stage fintechs need banks just as much as banks need fintechs. It isn’t a one-way street. They need something from you.

It isn’t—as the caption on this cartoon says, “With your idea and my nothing, we could be rich.”

It doesn’t work like that.
Fintechs have a life cycle. For the sake of simplicity, I’ve broken that down into four stages. Whether and how a bank interacts with a fintech in each of these stages determines

- what risks it bears,
- how much work it will need to expend, and
- how much value it might realize.

**STAGE ONE:**
Proof of Concept / Pre-revenue Stage
Let’s start with the early startup stage—let’s call it the “Proof of Concept/Pre-Revenue Stage” or Stage 1.

STAGE ONE:
Proof of Concept / Pre-Revenue Stage

- Potentially the most rewarding time to partner with a Fintech
- Undoubtedly the most risky
- Bank must have sophisticated CIO and Risk Management systems in place to even consider

This is the proverbial garage. This is where the real fun is. The reward for being an angel investor or bank partner—to be one of the first to believe outside of the actual founders—is potentially enormous.

It's also unquestionably the most risky stage to get involved with a fintech. The overwhelming majority of Stage 1 fintechs fail. Great ideas do not always lead to great companies. The market may not be ready for a great idea. Angel investors—and companies like mine, who frequently look at these early stage organizations—know that market receptivity is key…is the market ready to take this leap? If only I had a nickel for every electronic bond-trading platform that had passed by our doors in the aughts…or for every payments company promising to utilize blockchain, more recently.

In some instances the business case, the potential for savings—both of dollars and time—are impossible to ignore. But human nature finds a way to strangle most ideas until the zeitgeist—the spirit of the times—is ready for them. So you need to be patient if you play in this space. Not every seed sprouts in two weeks.

A bank should not even think about entertaining discussions with fintechs at this early stage unless it has an extremely experienced CIO, a very robust risk-management system, and access to very experienced legal talent. Most small banks do not fall into this category. They have no need to pay the dollars to obtain such a CIO with her or his supporting cast. And the risks they are used to assessing are focused on credit, interest rates, and mature vendor management, as opposed to the myriad of risks presented by a Stage 1 startup.
There are a number of other considerations in play with a Stage 1 fintech. Again, I know. We’ve been one. Now that we are mature, our company frequently turns to Stage 1 fintechs for new service and product ideas. But it’s hard.

For example, if one partners with a Stage 1, you may find it necessary to guarantee performance to end-customers and otherwise find yourself trying to mitigate a host of reputation risks should the venture not pan out.

That’s not all. In many instances, you—the bank partner—will need to introduce a culture of regulatory compliance to the startup and, if necessary, impose it. The three principal founders of Promontory Network (I being one)—all had banking and bank regulatory backgrounds—so we knew what we needed to put in place. Some leaders of young fintech startups do not have this kind of background. Hence the need for any potential bank partner to have a solid risk-management system and team in place. And, typically, a small bank’s systems are not up to the tasks of even identifying all the potential risks, let alone measuring and mitigating them.

Lastly, depending on the nature of the service—whether it uses personally identifiable information or involves access to accounts or payments—a Stage 1 startup may not be in a position to establish an adequately secure environment around its systems and data. A bank may find it necessary to bring the technology in-house to ensure its integrity and multiple redundancies.
And since we’ve touched on legal issues, one matter that frequently gets overlooked is IP or intellectual property risk. This is the risk that the technology violates one or more established patents. Have the Stage 1 founders conducted a patent search to see if they might be infringing on any patents? I can say that we have never danced with a single early stage fintech that had done this simple, but not inexpensive, task. Everyone claims they have a patent application (not an issued patent) at this stage, but that is meaningless. You need to understand whether there is any potential for an infringement claim. The fact that the Stage 1 hasn’t been sued means nothing because a patent holder is unlikely to sue a pre-revenue startup. They are most likely to wait until the startup makes real revenue and gets a deep pocket. You could be that deep pocket. So beware.

Thankfully, the age of business method patents—which littered the IP landscape for decades—is coming to an end. But one still must be careful. Patent trolls still abound.

Then there is still the risk that the Stage 1 fintech just runs out of steam—the team devolves, projections don’t pan out. Yet your bank may have become dependent on the technology.

There are ways to protect yourself. One method to consider to mitigate against failure is to have the fintech put its software into escrow, where you may be able to access it should the fintech fail. At least then you can decide whether to continue providing the service to your customers regardless of the Stage 1’s decision to cease doing business.

Another way to mitigate against many of the risks presented by Stage 1 fintechs is to take a controlling or substantial interest in the company, ensuring there is adequate upside for the founders to continue their work. We did this with one of our more successful service acquisitions. The organization came to us with a great idea. They had the know-how; we had the ability to build it, deploy it, and to scale it. And scale it did. It is now our third most profitable service.
But at the beginning we were worried about potential intellectual property claims—regardless of merit. IP litigation is incredibly expensive. It can cost millions to defend against even a frivolous lawsuit. The patent system is broken, I fear. And, if you are an investor in Stage 1 firms, that is your problem.

I’m familiar with a case in which, about a decade ago, an early fintech company got together with another firm that had ideas for a financial technology product. The other firm had the know-how, while the fintech company had the ability to build it, deploy it, and make it scale. Of course, the fintech company wanted assurances that there were no intellectual property issues with the product. The other firm gave it representations and warranties to that effect. The patent search came back clear.

The fintech company committed a substantial amount of funding both to ongoing payments to the other firm and to developing the product. When the lawsuit came, the other firm lacked the capital to stand by the indemnification. Fortunately for the fintech company, it had identified this risk upfront. In exchange for releasing the other firm from its indemnification obligations, the fintech company was able to end its ongoing payments to the other firm, the savings from which helped to defray the cost of the litigation. The total legal expenses exceeded several million dollars even though the case never went to trial, but it was worth it in the end for the fintech company, because the product now brings it tens of millions of dollars in annual revenues.

The lawyers also always win.

_How many lawyers does it take to screw in a lightbulb? How many can you afford?_

If your bank cannot afford to assume that type of risk, a Stage 1 partnership may not be for you.

Again, the rewards are great, but the risks are also great. They go hand-in-hand, as you should expect.

My point here is that deciding whether your institution is ready to partner with a Stage 1 fintech is more than looking at how well you like the business model. It’s more than whether you can wrangle favorable pricing or exclusivity. It’s how well you’re able to accommodate a young firm’s inevitable weaknesses.

I’d argue that you should see the decision to jump on board a Stage 1 fintech much as angel investors view their investments. They know that not all baby turtles make it to the sea. So they develop a portfolio of investments, knowing that most may fail but with the hope that one or two might strike gold.

You have to be willing to try and try again. Or as the cartoon says:

_“Listen . . . You go tell Billy’s mother, and I’ll start looking for another old tire.”_

You must be willing to get on that tire again, notwithstanding the sharks.

I’ll tell you how we handled all these risks way back in 2002, when we were a Stage 1 startup.
We partnered with the Bank of New York. Instead of following the traditional model of raising money in various rounds—starting with angel investors, then moving through A, B, and C rounds of venture capital and so forth—we raised all our money at once, up front. And then we asked the Bank of New York to handle all the wire transfers for us, to serve as our books and records keeper, and to promise to our bank customers that even if we failed in that early stage, the Bank would step in so the transition would be seamless from a bank customer perspective.

While the Bank of New York didn’t take a controlling interest in us, their 40% stake is sizeable, and they have a sizeable presence on our board to ensure we are operating appropriately from their perspective. For us, this partnership was a great way to get us past the hurdles we have just discussed. And the rewards to BNY have been well worth their efforts.

Stage 2, the initial growth and early customer acquisition stage.
“Did you hear the news? We’ve gone from startup to upstart!”

While I doubt there are many Stage 1 fintechs in this audience, I have a feeling there may be some Stage 2s or “upstarts.” Or perhaps they are all at Finovate.

**STAGE TWO:**  
Initial Growth / Early Customer Acquisition Stage

- Still a highly rewarding time to partner with a Fintech
- Viability of product and Fintech itself less in question
- Still must have sophisticated CIO and Risk Management system in place to even consider
- Must often bolster a weak compliance framework

If your bank possesses the right skill-set and is able to take and manage the inherent risks, this also
has the potential to be an extremely rewarding time to partner with a fintech.

Obviously, the Stage 2 has gotten past the “first bank problem,” having convinced one or more banks of the worthiness of its ideas. That’s huge—having a few happy customers. It demonstrates the technology and general economics work. That takes a lot of risk off the table.

But you’re not home free. You still must have a very sophisticated CIO and risk-management structure in place to even give a passing thought to working with a Stage 2.

While a Stage 2 will have set up a compliance system, it’s often weak and untested. It’s often literally a paper version of a compliance system—a set of policies not necessarily appropriately tailored to the risks, with uneven adherence and a lack of testing. Your institution may not be the first bank with which it has worked, but your bank may be the first that has the know-how to take compliance seriously. And while you may be the 10th bank customer, you could be the first bank to be examined by its regulators for its use of this new service. So take care.

Fintechs that work with banks must be held to high standards. It’s easy to get caught up in the hype.

**STAGE TWO:**
Initial Growth / Early Customer Acquisition Stage

- Data ownership, retention and privacy policies, and allowable uses often require close scrutiny and modification
- May need to ensure some level of comfort by the regulators
- May want/need to take an ownership interest in Fintech to influence decision-making

In addition to most of the concerns we discussed in connection with Stage 1 firms, such as IP risks, the strength of the security perimeter, the need to plan for failure, etcetera, you’ll find a need to dig into the service or product contracts. You’ll need to have a full understanding as to things such as data ownership, data retention, and privacy policies. The fact that 10 or 30 banks may have signed a contract means little unless you personally know those banks and the standards they impose during the contracting process. Most banks find contracts with firms at this stage require the review of specialized outside counsel.
A Stage 2 also may present novel issues on which a regulator hasn’t opined. While you are unlikely to get—and shouldn’t need—a letter from a federal regulator that blesses the service, you or your counsel may need a legal opinion from a respected law firm—yeah, that law thing again—as well as some assurance that the regulators are at least aware of the new service and haven't expressed any reservations about it.

Many Stage 2 startups are leveraging modern engineering techniques that were pioneered by the likes of Amazon, Google, Apple, Facebook, and others. These techniques enable startups to develop new products and solutions in as little as a few weeks. While enjoying widespread adoption outside of the financial services industry, many of these engineering techniques can be seen by banks and regulators as lacking important internal control concepts.

By understanding the importance of some of the more traditional controls and adapting them to the newer engineering techniques, governance can be enforced, and even enhanced, without losing the efficiencies gained from automation. For example, in traditional system development it is important to obtain management sign-off at various stages in the development, testing and deployment processes. While automation is usually relied on for improving the speed of development and deployment, it can also be used to incorporate required approvals into the process by electronically requesting management's authorization to proceed to the next step. The automation can store this information, capture other associated documentation, generate other related artifacts that may be required, and store them together in a neat and orderly package associated with the particular build. This can then be retrieved as necessary to satisfy regulator and internal audit requests. And they will request them.

The key here is that automation must not only be used to deliver innovative solutions more quickly, it should also be used to mitigate risk and better enforce compliance. You should insist on this.

Also, with the rapid pace of cloud adoption comes other concerns. We have all heard stories about an AWS outage (that’s the Amazon cloud) taking out hundreds of thousands of websites for half a day. This only happened to websites that weren’t designed to withstand a regional outage. Such a design should be intolerable for most fintechs.

While we’re on the topic, keep in mind too that cloud adoption is a relatively new area for the banking regulators. We’ve learned that it’s an area that they are not yet very comfortable with, so reliance on the cloud without an understanding of the associated risks and solid mitigation plans will quickly attract their attention.

Depending upon the strength of a Stage 2 fintech, it’s still very possible that you’re going to want to take an ownership interest of some kind, however small—not only to monitor and influence decision-making as it continues to grow, but also to recoup the value that your bank will be giving to the fintech.

Our company has worked with a number of Stage 2 fintechs. It’s where we see the most value given our strengths. But it’s tough. It seems most Stage 2s, having passed out of the perilous Stage 1 and having had their business proposition validated to some degree, have a decidedly optimistic take on their value proposition. They see what they can offer, but are less clear on
what they need. So it can be hard to reach a common understanding as to the value of what each party brings to the table. In their eyes, they are the next unicorn, whereas we might just see a promising venture, fraught with risk, seeking access to our customers.

It’s only human to see things differently. That’s not necessarily a bad thing.

Even though our institution has well over 100 technologists of every stripe, a highly experienced CIO, and a strong risk-management framework, we still often hire third-parties to conduct due diligence on Stage 2 companies. Not only do we benefit from the impartial eye of outside specialists, it also gives comfort to the Stage 2 fintech that they aren’t giving away the store before we have come to final terms.

Last month, our firm concluded a survey of over 300 of our client banks—we asked CEOs, presidents, and CFOs what they thought was the biggest risk when choosing a fintech partner.

Almost half answered a “lack of understanding of regulatory and compliance issues.” A distant second was the increased threat of data breaches. Stage 2 is where these regulatory and compliance risks are prevalent. Focus on them. And try to add value with respect to mitigating them. If you can find a point of agreement—you have a chance to participate in an exciting and potentially profitable venture.
Stage 3, the rapid growth stage.

If you can’t read the cartoon – the person leading a team to the “Start-up Summit” is saying, “Start chilling the champagne. We’ve almost made it.” But beyond the summit is a much larger mountain called “Growth Stage,” and it’s littered with skeletons.

How true.
Just because your institution isn’t ready to handle working with a Stage 1 or Stage 2 fintech, that doesn’t mean you need to miss out on all the potential for innovation and modernization for your bank. Stage 3 companies—those fintechs that are experiencing rapid growth but may still be short of sustained profitability—can offer great competitive advantages for early adopters. Even if you’re the hundredth or three-hundredth financial institution to join a fintech service; that still puts you in rare company, given the many thousands of institutions out there.

Moreover, not only can you get a competitive advantage, you also avoid most of the risks present in earlier stage companies. Indeed, you will benefit from the experiences of earlier customers.

But here’s the thing. Financial viability can still be a question—particularly now days, when firms want to raise the minimum amount of capital necessary to keep growing so as to minimize stock dilution. Moreover, general due diligence—including a thorough understanding of the contract, use of data, security, and regulatory compliance—remains a priority.
**STAGE THREE:**
Rapid Growth Stage

- Don’t believe the press yet, it’s not their job to look under the hood or check claims
- Can still be difficult to get needed reps and warranties and indemnification for errors
- Look for a deep culture of compliance vs only an emphasis on innovation

But while due diligence—beyond just what the FFIEC (the collective of federal bank regulators) demands—is still required, at least companies in this stage are more prepared. They will have third-party reviews of their security profile, they will have performed periodic penetration testing, they will have a more robust risk-management program, and they will have reasonably solid economics—able to show either their profitability or some path to achieve such. So your institution should not have to ask many unexpected questions. But you still need to think afresh upon the answers.

Whatever you do—do not put your trust in the press. It’s not their job to look under the hood. And they don’t. That’s your job. And do not assume that one fintech in the same line of business is similar to another. The disparities can be vast.

And the lawyer in me advises—always beware. We’re aware of profitable Stage 3 firms that were facing life or death legal judgments. Their customers rarely bothered to even look to see if claims were pending, let alone do a legal analysis of the claims and inquire whether or to what extent insurance might provide coverage.

Many banks do not even look closely at financial statements, for that matter, to understand the depth of reserves on hand for contingencies—despite all regulatory guidance demanding they do such.

Our institution worked with one late Stage 3 firm, and we felt it necessary to send in a team of consultants to do a top-to-bottom review of the company’s core processes. It cost us hundreds of thousands of dollars and took months to complete, but it was worth it. While the company was
well-known and highly valued, our work both gave us comfort and uncovered a number of items that needed remediation—which was ultimately done.

In general though—Stage 3—which may include a good number of fintechs at this conference—often offers the best risk/reward propositions for many banks.

Even so, you need to intuit whether the company has a deep culture of compliance or whether it primarily emphasizes and rewards only innovation.

One good sign to look for is whether your Stage 3 fintech has any mega-bank customers. Some of the mega-banks—*for all their issues*—have excellent and exhaustive vendor due diligence protocols. I know that doing business with such banks can improve a company’s practices. For example, to meet the demands of doing business with large banks, a company may want to allow white-hat hackers into its firewall to see whether they would be able to upgrade their credentials in such a way where they could potentially do harm.

Similarly, mega-banks often require the use of ethical hackers with an expertise in *social* hacking or social engineering. That is where an outside firm tries to gain access to your physical space without permission or tries to fool staff into giving them credentials which they can use to get into your systems (otherwise known as “phishing”).

Over the years we’ve seen a lot of creativity from these hackers. And it requires continuous training to keep staff on the look-out. Our most recent ethical social hack involved a man dressed up in a maintenance uniform used by our building’s staff, with fake credentials, asking for access to our floors so he could check on the pressure of our fire extinguishers. Cute, right? Thankfully, our front desk stopped him, remembering that the building had already done that check two months prior.

My point is that Stage 3 companies will be much more prepared than earlier stage companies. But you still must dig deep. Most will have the type of security reports your vendor management people will appreciate and should show a reasonably sound balance sheet. And if they do regular business with one of the several large entities known for their expert vendor management, you’ll know that they are perhaps just as buttoned up as your own institution.
Here’s to the two of you. We’re now talking about two consenting adults.
What is a mature fintech? It's certainly not just a question of age.

I know plenty of marginally profitable fintechs that have been in business more than a decade. Age means little if the focus is not on building a better and better business, but on extracting as much cash as possible.

A mature business will have top people, processes, and products. They will invite you to their offices and introduce you to their people in whom they have pride.

Their products will have gained traction in the marketplace—throughout a sizeable segment of the industry.

And the business will be financially stable—consistently profitable.

So…what’s to gain in working with such a company? Still, a lot. At a minimum, you can level the playing field with peers that already provide a similar service. That’s important. For example, you don’t want to be the last bank on the block to offer remote deposit capture.

At best, you can vault ahead of your competition.

Thankfully, the hurdle to clearing your bank to do business with Stage 4 companies is relatively low compared to any other stage fintech. The trick will be to figure out what due diligence items matter the most to your organization. Most likely, the fintech will have heard it all: been asked every possible question and have prepared or easily created responses. So too with the contracting. The fintech likely has already wrestled with hundreds of other Clarence Darrrows and proposed a reasonably fair contract that it is unlikely to substantively modify.
Importantly, many mature fintechs are considered Bank Service Providers and thus are examined by the federal banking regulators. They might be on a two- or three-year examination schedule with interim reviews. A main focus of these onsite, inter-agency exams is on cyber-security and risk management as a whole. And you can often get a copy of the exam report from your own regulator. Do it. Get it.

Here's the thing though. We spoke at the start about how mature organizations need startups to help them develop new ideas, assemble critical talent, and so forth. Well, mature fintechs are no different. They too have their own legal, compliance, and risk-management departments that can be prone to push back against new ideas. Hence, larger, supervised companies like us turn to other, less mature fintechs, for the same reasons banks do: in recognition that it's more difficult for more mature organizations to maintain that culture of innovation and take material risks.

That's why I can speak from experience of the risks and rewards of working with every stage of fintech organization. We have passed through every stage and work with companies from every stage.

Assuming your mature fintech still places an emphasis on innovation, through partnering, acquiring startups, or otherwise, there are a lot of benefits to working with larger, stable entities.

What every banker can affirm though—and we too in our interactions with other mature fintechs—is that some Stage 4 players behave like utilities. They only show the love at contract renewal time, and even then it’s limited. They “capture” their clients—through large upfront investments and long-term contracts—and innovate only when they are forced to do so. It can seem that their best form of innovation involves finding ways to charge new fees.

So alas, there is peril with every fintech stage of development. My point today is that the best defense in all cases is to perform superb due diligence. And, in the case of mature fintechs, it is best to contact your fellow banker friends to see what they have to say.
I hope I’ve made clear that fintechs of every stage have much to offer. Whether a relationship with a particular fintech is right for your institution depends on your bank’s capabilities and risk tolerances. If you spy a Stage 1 or 2 fintech that you really like, but you appreciate you are not ready to partner with them, please refer them to us or to another mature fintech. Not only do we want to serve our customers better, we believe that early stage fintechs are key to the survival of the community bank sector—which is our customer base.
I realize I’ve gone on and on.

I'll be around today and tomorrow morning for questions from any and all.

Thank you.