Interviewer: So, Dennis, in the last seven to eight years I think many Chinese, Indian and European banks have affected a very revolutionary approach to their core banking transformation. A lot of Nothing American banks, however, have not. Why is this?

Dennis: Maybe it might be better to begin with the word revolution and decide what that actually consists of. For instance, I've seen banks go from pen and paper to automation, and that was a revolution. I've seen banks go from a big box to a little box, and that was a revolution. There are a variety of these that are actually possible, but your premise, is absolutely spot on.

Outside of the United States there's been any number of banks who have taken on the challenge of doing a transformation and a revolutionary approach. One country maybe we could focus on might be India. In India there was many private banks and government banks. And when India deregulated, there was a lot of pressure for innovation, and the private banks, who didn't have quite the size of the footprint, if you could put it that way, as a more traditional government bank, they took on transformation very quickly. Their customers were attriting, and the private banks actually became, interestingly enough, a catalytic event for the government banks to then take it on and do the same thing, which they have done and now have regained much of their market share. In Europe they were converting to the Euro, and then they were basically incorporating all of the eastern block, and that kept them, pretty busy. And they took on transformation as a key enabler in order to get these things done.

In North America it's a very different profile. Just as an example, the CIOs tend to be a little older here in the United States then maybe they are in some of the BRIC countries, Brazil, Russia, India and China. And those countries tend to be a little bit more risk sympathetic than maybe we are here in the United States, and it's also true in the United States that, while the technology tends to be quite old, it's getting the job done in terms of at least being able to handle the transactions – the transaction throughput. But we are seeing a good number of banks now discarding the question, "Should I consider a transformation?" and incorporating a much more relevant question, which is, "When should I start to do a transformation?"

Interviewer: What are the risks – I suppose, what are the risks inherent in this approach, and what are the economic implications?

Dennis: Let me use a metaphor. You know, before Columbus came to the New World he actually had a lot of trouble raising money and

personnel who wanted to go with him and travel to somewhere which he wasn't sure where it was. But when he got back, raising money the next time and getting people to go was a lot easier.

Frankly, there are so many really good case studies of institutions outside of the United States who have actually taken on this challenge and who have done it very, very effectively. You know, we've converted, by anyone's measure, probably the largest bank in the world who's ever gone through a core banking transformation. That's not to say we just do big banks, but we have accomplished the largest institution in the world. State Bank of India engaged TCS, Tata Consultancy Services, some years back to take on the transformation, and while obviously there are challenges along the way, this few years later now, the bank has actually experienced an enormous change. The deposits have gone up 103 percent. The loans have gone up 226 percent. The profitability of the bank has gone up 83 percent, and the employee productivity has gone up 250 percent through the course of the transformation.

And while we were doing this, we actually converted 14,500 branches, more than probably any two or three U.S. banks put together. The economic implications can be just startling, and I think if a bank were interested in considering a transformation, there are innumerous studies like this that could be presented to them about the efficiencies that could be gained by bringing in a vendor such as TCS Financial Solutions to accomplish this.

Those 14,000 branches are supporting 170 million accounts – 170 million accounts. We only got 300 million people in the United States. That's a bank with 170 million accounts, , 32 countries, and their processing speed is 10,700 transactions per second. Faster than anything that anybody in the United States could even touch. That's one bank who has been through this and who has every metric that anybody could possibly be interested in, and yet, we have smaller banks of one branch where we're accomplished similar results.

Interviewer: So, how are these risks best – I suppose, best mitigated, and what are the economic implications of them?

Dennis: The risks can be mitigated in a variety of ways, and typically, the economic implications are just about all positive. The heart of the issue I think is for a bank to align themselves with the correct vendor or a collection of vendors. Risk mitigation has several dimensions to it, all of which can be addressed by the bank's executive team taking a very proactive – very proactive hand in the process. They alone can provide the willpower the bank needs to

actually see themselves through this.

But in searching for a solution, a way forward for the bank – and I don't mean a computer solution. I just mean a way forward, a solution to the way the bank's myriad of problems of customer attrition, low customer service levels, compliance issues and regulators breathing on the bank for improvement in those areas, deteriorating PNL, I mean, the list goes on and on, and to address many of those things, a transformation is actually an appropriate term, we believe. And to do at transformation, one would need to align themselves, as I mentioned, with the right vendor.

New York Harbor is a huge harbor, big, deep-water port. No big ships come in there without a pilot. They wouldn't even think of it. It's probably unionized too, so I'll give it that, but without a pilot they wouldn't even consider entering the harbor. We would put forward, TCS Financial Solutions as just one of those vendors, one who has the right applications, as proven by our numerous implementations of solutions around the world. We now have 240 financial services firms in 80 countries who are happy. And we also have a branch of 40,000 people who just do financial services and have the domain expertise and history of having done this over and over again. So, risk mitigation can ultimately, I feel, be addressed by doing a thorough – completely thorough evaluation of possible partners to do business with and selecting the one that makes the most sense for the bank, which we like to think that would probably be us in most cases.

Interviewer: I know there's some sort of common risks to both the evolutionary and the revolutionary approach, and I suppose, conversely to that, what risks are unique?

Dennis: In both cases, I feel the biggest risk that they're facing is a shortcoming in executive commitment to a project. Institutions can do anything they want to do if they make their minds up. Now, in an evolutionary approach, which, by definition, is going to take longer than a revolutionary approach, the danger even gets greater that along the way there'll be a change in management or a change in philosophy or a change in strategy which will dramatically undermine the likelihood that the project will reach the conclusion that the banks set out for it to begin with.

And as the duration gets longer, if the project team doesn't have the luxury to be flexible enough to change with the market conditions and the priorities for the bank, when the outcome is actually arrived at it's probably not going to be what the bank wants. Executive commitment is absolutely crucial in their

proactive management.

The second I would hold is the – a properly empowered transition team, and empowered – by that I mean folks who have the authority and resources to make decisions and make those decisions stick. There's a variety of ways to mitigate against these problems, but those would be two I would be especially concerned about.

It isn't the vendor. We've done, TCS Financial Solutions, the business that I'm in for applications for banks, brokers and insurance companies, many, many, many hundreds of projects like this. TCS, Tata Consultancy Services, at 120,000 people, have done thousands of projects like this. We have no failed projects. Our name is not in the paper because this bank changed their mind, so mitigating against those kinds of problems can be done, again, by finding a vendor who I think has the stamina and the size of a bench to be able to pull these things off for the bank.

Interviewer: What are the most common causes I suppose for customer complaint around the implementation of an integrated core banking transformation system?

Dennis: Well, the customers suffer unfortunately by what maybe I could call disorientation. "Oh, I belong to this brand, and now that brand's coming along, and so there might be a merger in play." Or the bank itself without a merger is planning on doing an application change out. Historically, what we're taught inside corporations what the biggest problem is they face is communication, and we feel that's probably similar unfortunately with the customer base. The communication is not at a level that warrants or justifies the customer's loyalty. Just the opposite. When they hear change, they get scared as opposed to finding out when they hear change they're going to be given new products, new services, new access. Instead of that, they very often will hear change and be ripe pickings for the competitor to come along and take them away.

The second would be training and – the training of the personnel at the bank itself. Train the trainer is the classic approach, which we espouse. We've trained thousands of trainers at State Bank of India, who then went on and trained hundreds of thousands of people at the bank. *(Laughter)* Being able to do effective training and being committed to it going forward is a great way to mitigate, neutralize customer problems.

And then there's one, which has probably not gotten a lot of

attention, which I would actually put on the table, which is an unreasonable attempt by the bank to force fit an out-of-style, out-of-affective usage, old part of the old application and reengineer the new application to do what the old one did, right. So, the old one was doing something that probably could be done much better or maybe it shouldn't be done at all, and we're unreasonably forcing the new transition solution to accept these old requirements, when in fact they're out of date. And that can, in fact, slow projects down, which leads us back to executive willpower.

Interviewer: And as we mentioned at the top of the program, core banking systems really keep the lights on. What are the performance concerns associated with these new applications, and how do these issues get – I suppose get discovered and remediated?

Dennis: You know, SOA is a very effective way of approaching the design development of applications. in SOA, the performance issues are pushed downto services and business processes, which has implications. Could be negative, could be positive,. And we have benchmarks in this regard across multiple platforms, mainframes, UNIX, Linux, Windows, that would give people, I think, a great deal of comfort.

I'm going to use India again as an example, where we have TCS banks – core banking running at one of the institutions, and we follow a hybrid or loosely-coupled philosophy about this technology. For instance, to get the right transaction throughput, the MIPS, the transactions per second, you really need COBOL. You could try to talk yourself out of it, but I'm going to give our viewers a couple of examples maybe they shouldn't get talked out of it.

For the user interface you really want to use dot-net or Java, okay. For the communication level you would want to use C or C++, . Now, we have a bank in India – I'll just take a piece of the bank – they're running 10,000 branches –. And to run those 10,000 branches they actually have 128 CPUs doing the job. We actually know of another bank in India who's running what we think is probably an overly-engineered product; one that's probably been SOA'd for the sake of SOAing alone, if I could put it in those terms. They're running 3,000 branches on 300 CPUs. So, we're running 10,000 on 128, and they're running 3,000 on 300 CPUs.

That means we're running three times the traffic on one-third the set of boxes. SOA can be overdone, and that performance needs to be detected and can be detected if SOA is made a governance

program at the bank, the bank is trying to interconnect people, processes, application services and build the interrelationships and interdependencies on them, and SOA is an example of that, but the performance impact must be part of the regular quality assurance protocol that's going on. It's going to be done at design time, at development time, testing and production, and frankly, the earlier the problem is found the better it's going to be and a lot cheaper it's going to be to fix.

SOA is a technology and web services are technology as we embrace and built into our applications, but they have to be done – there needs to be a sanity check along the way, and so there is a, as I said, a hybrid or a loosely-coupled philosophy that we've built into our apps, and those are the actual results that we're getting. We think our customers are pretty happy with that.

Interviewer: This is a massive time of change for banking. Are there issues around compliance and core banking transformation, and if so, how should these best be addressed?

Dennis: We hold that the compliance– there's two parts of that. There's actually corporate compliance, doing the right thing according to the corporate mission and what the corporation expects, as well as regulatory compliance, and those two things are not always necessarily simpatico. but what we espouse and what we deliver into, the banks that we do business for, is a 360-degree view of both sides of the equation. By using solutions that we deliver the bank ends up with a 360-degree view of the client. So, across all the relationships that the bank has with the client that's actually a big deal.

But we also deliver a 360-degree view of the bank. I'm a retail customer or I'm a corporate customer, a treasurer, I want to know – I appreciate the bank wants to know because they don't want me over-committing the same collateral to two different liabilities, but I also want a 360-degree view of the bank. I want to know what everything I have, and that's one of the things that we deliver, and that goes directly to help mitigate the issues around compliance.

The 360-degree view of the customer really does support proactive compliance, both the corporate as well as the regulatory, and the 360-degree view of the bank by the customer obviously translates into less customer attrition and much higher customer satisfaction levels.

Interviewer: And financial institutions are, I think, for the large part comprised of divisions. These divisions operate with a degree of autonomy,

which is created the largely out of favor now, silohed approach. If a bank operates its daily business in this fashion, how do you change the way it approaches something as enormous as core banking transformation?

Dennis: I actually spent the first part of my career working on Wall Street for brokerage houses, and I did see that unfold and continue to this day. Lines of business, which is a euphemism for profit centers, would be very powerful institutions in their own right. Let's say the mortgage business, to pick on the bad guy I guess for today because they're out of – they're in disfavor, but the individual who would run those profit centers would be very autonomous and would have a PNL that would warrant them making IT decisions which were good for the PNL but not necessarily good for the institution, meaning one PNL could have one database and one manufacturer, and another PNL – or in my world, they could have one application in one business unit and a completely different vendor application in another business unit, even though one vendor could have done both. So, that's still a problem today.

What we espouse to the bank is a combination of both revolutionary and evolutionary approach, which I think takes us back possibly to the first question again. There's a variety of ways to actually attack the problem. Let's say we went to an institution and said, which we do, how would you like to consider a revolutionary approach to converting the bank while incorporating the best possible aspects of evolution? They're very intrigued when you present it to them that way.

So, let's say we're going to do this. We're going to take something and begin with the customer information file, this 360-degree. Let's convert the customer information for the bank completely. If you're a domestic bank we'll just do it here. If you're a global bank, we'll do it everywhere. We'll do the entire customer information file. Once we're done with that, we'll do the deposits, and then we'll do the loans. Then we'll do origination and on it goes. They go, "You know, I could probably live with that."

Or let's take another bank. This one's in China. I've talked about State Bank of India, 14,500 branches. We're now working on Bank of China. Bank of China dwarfs State Bank of India. Bank of China is 22,000 branches spread across 32 provinces. We're going to do a province at a time. Now, this bank is bigger than anything that we have in the United States. The only thing they're not bigger in is in asset size. the typical person in the United States has more money in a bank than probably the typical person in China. So, the raw asset sizes are smaller in China or India or

many other part of the world, but the transaction volumes are phenomenally bigger. The branch counts are phenomenally bigger.

So, we'll take a line of business approach. We're working vigorously on Bank of Pichincha in Ecuador. Bank of Pichincha is going through a transition. Their ratio at one point was 82 percent. It's now down to 62, and they're going to 50. These are numbers that turn some banks green with envy. So, it is possible, either through let's take a branch, let's take a province, let's take a line of business, but let's take. What's happening right now in the United States is nobody's taking.

There is definitely a way forward. There are beacons of light out there attracting institutions to take this step, and more and more institutions around the world are doing so. Right here today in the FST conference we had a panel discussion and on the panel were two banks from Canada. *(Laughter)* There weren't any banks from the United States on the panel talking about core transformation, but there were two banks from Canada on the panel who are in core banking transformation. The other interesting part about it there wasn't an empty seat in the room. That might have been the most well attended session today, and it was about how come U.S. banks aren't going through transformation and had to be told the answers to those questions from banks from Canada.

The writing is on the wall. As I said a little bit earlier, the banks in the U.S. stopped asking the question, "Why should I convert," and now the question is really bubbled to the surface, "When should I convert?" Fortunately, there's people like TCS Financial Solutions standing at the ready, ever much so, to help 'em do that.

Interviewer: Dennis, thank you very much indeed.

Dennis: Thank you. I very much enjoyed it.

Interviewer: Thank you.

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