Session 2 – Empirical Finance

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Two wonderful speakers, René Stulz and Luigi Zingales, have agreed to help us with the briefing part of empirical finance. Now, I have to tell you, it always makes me nervous, as an investor, to think that any finance isn't empirical, but maybe one day next year we'll have a programme on emotional finance, or something like this. And the way it will work this morning is that first Professor Stulz will speak, then Professor Zingales. We'll give them a little chance to interact with one another, and then we will open the floor for questions. I was a little worried that everybody on the panel but me has a PhD from MIT. Happily, they've gone on to other institutions so that I assume that their life backgrounds will make sure that we have an interesting dialogue. René.

René Stulz
Everett D. Reese Chair of Banking and Monetary Economics;
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Thank you, Roberta. It's a pleasure for me to be here. I thank the organisers for inviting me. I want to talk about mostly whether New York has become less competitive in global markets. Hopefully that fits with the theme of the conference.

The first issue is just, why would we care? Why does it matter? I am going to look at this from probably a narrower perspective than Luigi and then I will talk mostly about cross-listings, look at the argument that New York has been, become less competitive because firms cross-list less in New York. If it's indeed true that New York is less competitive, it could be so for a whole host of reasons. It's a little bit surprising that the debate has focused only on the first one, which would be that the US regulatory environment has become less favourable. That's the claims that people make. That could be one reason, but there could be lots of other reasons. It could be that the foreign environment has become better, or it could be that the US was A student; somehow the other countries have become A students also and, as a result would have become less, more, more attractive.

It could be that the exchanges are doing something wrong. The New York Stock Exchange was slow going to electronic trading. Maybe that mattered. There could be other reasons. There could be business cycle reasons. Now we have very high valuations at the end of 1990s that then dropped very sharply. There were a few IPOs for a number of years. Or there could be business cycle reasons. It's also important to remember that we are talking about equity markets. When you look at other markets, the US lost the inter-bank money market in the 1960s and the 1970s. So, there were lots of reasons for that, some having to do with regulation. That wasn't the end of the US.

Now, my focus is going to be on cross-listings. My starting point is that there is a lot of recent research that shows that there is governance benefit to foreign firms from cross-listing in the US. Part of the benefit is that they become subject to the people in this building (the SEC) if they list on an exchange, and they become subject to US laws and regulations. That can be a benefit because it means that it commits the corporation to respecting the interests of the shareholders better than they would if they were just subject to local laws on regulations.

This benefit is especially important for foreign firms where you have a controlling shareholder that might be tempted to operate the company to his or her own interest rather than to the interest of the shareholders. So we have a governance benefit that results from improved money drain. Some of this improved money drain is through laws and regulations; some of it also is because of the attention that gets garnered by firms listed in the US from analysts, newspapers, and so on. So this governance is accompanied by a higher valuation of firms, which reflects that the shareholders are going to get more of the cash flows of the firms, is accompanied by a lower cost of capital, and is also accompanied by better access to capital.

When we talk about listing in the US, firms have one in three choices. One is a private placement through Rule 144(a); second one is what's called a level one listing on the OTC market; the third one is to list on a US exchange. The governance benefit that I talked about really comes about from what's called a level two or three cross listings for an ADR programme, or a direct listing on a US exchange. It really doesn't apply to the same extent for the other forms of listing. This building (The SEC) doesn't have much to say about the level one or the Rule 144(a) firms.

In London, the choices for firms are ordinary listings on the exchange, depository receipts (ADRs), which would be on the exchange, and then there is this newer market, AIM,

These six choices are really what we'll focus on.

When you think about firms cross-listing, it's important to understand that most firms actually don't cross-list. So, when you look at this graph, the purple line is the number of firms for which we have data. We had data for 1998 for firms that did not cross-list, and the blue line represents the firms that cross-list.

There's an obvious reason why a lot of firms don't cross-list. That's not because the US is not competitive, but it is because, coming to the US, the controlling shareholders have to sacrifice something. They sacrifice some of their ability to take advantage of the minority shareholders. So they face a trade-off. You can come to the US, and you give up some of your discretion as a controlling shareholder, but in exchange you get the ability to raise capital on better terms, and hence to grow and take advantage of growth opportunities. For some firms, the trade-off is that you should come to the US; for other firms, the trade-off is you should stay at home.

Looking at 1998, I talked about the fact that there is a valuation benefit, and that the firms in the US are valued more highly. We have a graph of the cross listing premium at those countries in 1998, and the typical firm cross-listed in the US was valued more highly than matching firms in country it came from. If you have a firm from Italy cross-listing in the US, that firm would have a higher valuation. Not all of that higher valuation would be the result of the governance benefit we talked about. Firms benefit more from being in the US if they have better growth opportunities, because that's when you would want to raise capital. That was for 1998.

The question is: how has the world changed? Might the usefulness of cross listings have decreased? One of the arguments is that there's too much litigation and too much regulation in the US. I describe that as the anti-SOX hypothesis, by viewing that cross listings have decreased.

You could think of another hypothesis, though. That's what I call the loss of trust hypothesis. You could say that, well, we had WorldCom Cup, we had Enron and, as a result of that, and of the governance value of being associated with the US, where cross listing might have taken a bit of a beating, and eventually the value came back.

Now, to think about those two hypotheses, there really are dramatically different implications for policy. If the premium actually decreased, if the value of a cross listing decreased for a period of time because of loss of trust, then what you should be doing, to the extent that it hasn't been done enough, is build trust in the markets. On the other hand, if what explains the situation is that somehow the regulation just right but then with SOX we suddenly had too much of it, then obviously changing the degree to which companies are regulated would be the solution.

Yet, when you think about the implications of those two hypotheses for listings, they are pretty much the same. With either one, you would have expected a decrease in cross listings, and you would have expected a decrease in the premium for cross listings.

So, when people want to argue from a decrease in cross listings, that somehow we should have less regulation, it's important to remember that this alternative hypothesis has exactly the opposite implication, and so one should be quite careful.

So, we have two hypotheses. These hypotheses would predict a decline in cross listings on the exchanges, a decline in the listing premium, and then, obviously, with either one of those hypotheses, London would have become relatively more attractive.

Let's look at whether cross listings fell; let's look at whether the listing premium fell. The data that I will use comes from my paper "Has New York become less competitive in global markets? Evaluating foreign listing choices over time" with Craig Doidge from the University of Toronto and Andrew Karolyi from Ohio State University (which is available through ssrn.com as an ECGI Working Paper 173/2007).

When you look at the listing in 2005, you can see why it makes sense to focus on the US, New York, and London, because New York on NASDAQ have 26% of foreign listings; London has 19%; and no other market has more than 10%. Here we have a plot of the increase in US listings in the '90s and, a stabilisation on small decrease in the 2005. Chairman Cox mentioned that it had been difficult for firms to leave once they had acquired a listing. It's still difficult.

One can have two views on that. One view is that you should make it possible for people to come and go as they please. If you do that, then you really destroy the governance benefit, because it means - to use a term that Jack Coffee is associated with, "bonding" - it means that you really can't bond yourself if you can leave whenever you want. So we see only a small decrease. What we don't see is an increase, so some people might have thought that it increased so much in the '90s, it should keep going. Obviously that hypothesis makes little sense, because the population of funds that can list is finite, and so there's no way that listings could keep growing like they did in the 1990s.

Now, what about London? Did London do better? If you look at that, first you see the decrease in London until 2003. You see an increase after that. But all of this is really quite small. Now, why did London decrease? Well, on the graph you have the ordinary listings, you have the ADR listings, and then you have AIM. You can see that the exchange listings in London have kept falling, and they actually have fallen more than in the US, so it's not like the exchange in London is benefiting.

If you listen to the talk about a decrease in competitiveness, it's puzzling that then London hasn't benefited. Now, you see an increase of the blue on my graph is AIM. And you see a rather sharp increase in aim over the last few years. The problem with AIM is that the firms on that exchange couldn't list, typically, on the NYSC, or couldn't list on NASDAQ, because a typical AIM firm is really a tiny firm. And so there is a question about the relevance of that increase for the current debate.

These graphs give you listing flows from the 1990s to 2005, and you can see that the new US exchange listings did reach a peak in 2000 and have been smaller afterwards. You can also see that the growth in OTC and 144(a) new listings has been higher than for exchange listing. So, if somehow New York became less attractive, what you would expect is that the firms that now list, and the firms that listed after 2000, would somehow be different firms and have different characteristics than the firms that listed before, because it means that now they are getting a different product, and that different product is going to attract different firms.

So we looked at the characteristics of the firms that list, both before 2000 and after 2000, to try to find out whether there is a difference. And what we find is that there really is no difference. So a firm that would have found a listing attractive in the 1990s is similar to a firm that finds it attractive over the last few years, and so that evidence is hard to square with the notion that somehow things changed in a way that makes listing unattractive for some of the firms who would have found them attractive before.

We also look at the determinants of listing choices on trying to predict whether there is a deficit of new listings given the population of firms that could list in the US. Remember that there is this pool of firms out there, and some will find it advantageous to list, and some won't. And so, the question is, when we look at the listing choices over the last few years, given this pool, are there too few firms listing, listing in the US, or not? And when we construct that experiment, again, we don't find any evidence that there are too few firms; what we find is that the pool has changed. The firms in that pool are different from what they were in the 1990s.

One reason that the pool has changed is that a lot of firms have already listed. And another reason the pool has changed is that we have undergone a quite dramatic change in the stock market of a number of countries. We had high valuations and then the collapse. With low valuations, it's much less attractive to be in the US, because they reflect low growth opportunities. If you don't have good growth opportunities, the advantage of being in the US is simply not as attractive.

Then we looked at the cross listings premium, and I talked about why there is such a premium. We found this premium in the data, as I showed you, for 1998 in an earlier paper. So the question is, what happened to that premium?

Well, if New York has become less attractive because of a greater regulatory burden, what you would expect is that the firms that have listings would have suffered from that and, as a result, the premiums on those firms would have decreased. So we looked at that, estimating regression model where we tried to measure the difference in valuation for the cross-listed firms, controlling for the terminance of firm valuation. So the valuation measure we use is Tobin’s q. The controls that I mentioned there are all the bunch of things we know that affect Tobin’s q. And then we look at whether it's different for firms that are listed on US exchanges. Remember that Tobin’s q is ratio of the market value of the assets of the firm to the book value in the way that we use it. The definition is a bit more subtle than that, but for the purpose of, of this, that's what we are doing.

So, when you look at the premium of the time, we have it here for the US listings, to the left we have it for the 144(a); in the middle, it's for the OTC; then, to the right, it's for the exchange listings. We don't separate between level two and level three. There is an extra value to level three.

When you look at that, there's substantial premium for listing on an exchange. You can also see that, in this graph, the premium listing on an exchange was especially low in 2001, 2002, based on evidence of it being higher after that. Now, we talked about the loss of trust hypothesis. You could certainly argue that, if there was a loss of trust, the loss was the biggest in 2001, 2002. You could argue that that gives some support for that view.

When you look at the UK, for the years on the ordinary listing, there's really no evidence of a significant premium. So what this tells you is that a listing in the UK is really a very different animal from a listing in the US, and we argue in the paper - and I'm sure there will be debate about that, but we argue that there really isn't a corporate governance benefit from listing in the UK. And we also argue that, whereas firms listing in the US end up raising more capital after the listing, both in the US and at home, the same is not taking place for firms that list in the UK.

So this ability to raise more funds associated with the US listing is an implication of the theory of data governance benefit from listing in the US. You can see, though, that AIM behaves quite differently. Unfortunately we have just one data point on AIM, and we have few firms for which we can obtain data in the international databases we use. So at this point, I wouldn't make much of this, but it's certainly the case that the firms that list on AIM are different.

So, now, we investigate formally what happens to the listing premium in relation to the times that SOX was passed in law. The bottom line of our investigation is that we find absolutely no evidence that the premium fell after SOX. You can also see, from the graphs that we just looked at, that the premium was lowest of our sample period except for 1990 in 2001, 2002, and increased somewhat after that. Now, here we have, kind of, a graph with the premium evolving over time. You can also see from there, though, that it's quite difficult to reach conclusions about the premium, and obviously you could reach different conclusions if you had a different starting point. The premium was abnormally high in 1999 compared to all the other years. Obviously, if you put a lot of weight to 1999, you could conclude that, that it fell.

So, what do we learn from this? Well, based on the evidence that we have, it's really difficult to conclude that, when we look at equities, that there has been a decline in the competitiveness of New York. We saw that the characteristics of listing firms have not decreased; that listings, that firms make their choices as they used to, so that hasn't really changed; that there is no convincing evidence in our data that listing premium has fallen.

So we might conclude from that that there is really no evidence to support the loss of trust hypothesis, or the anti-SOX hypothesis, in recent years. You might argue, though, that there is evidence supporting the loss of trust hypothesis in 2001, 2002. Given that there are those two hypotheses, I think it's important in the public debate to be aware of both costs of other regulation, as well as possible costs of excessive laissez-faire in terms of reducing the trust in the market. The markets work because of trust, and it's certainly important to make sure that trust is there.

I think it's important to also think of those markets as working in global economy, and what, as a country, the US can contribute is a good institutional framework that enables firms to take advantage abroad of that framework. There is value to offering that service.

Thank you.

Luigi Zingales
Robert C. McCormack Professor of Entrepreneurship and Finance, University of Chicago Graduate School of Business; ECGI Fellow

It's a pleasure to discuss these topics in front of such a distinguished audience. There are two things that René and I agreed. The first is that there are really two distinct issues, and I think too often the debate has been missed. One issue is whether Wall Street is becoming more or less competitive; and the second is whether SOX is making, indeed, Wall Street less competitive.

Of course, if we conclude that one does not exist, then two is redundant, but we can conclude that one is true and that two is false; so I think that it is very important to distinguish between these two issues, and in my presentation I will do exactly that: I will focus the first part in trying to deal with question number one, and then I will attack question two much more broadly, trying to see whether it is indeed the case that regulation, and some other things, make Wall Street less competitive.

The second thing which René and I agree is that his approach is much more narrow than mine. I think that when we have to look at such a difficult question as "is Wall Street less competitive now than a few years back?", I think that we don't have the benefit of a long-time seers.

Chairman Cox said very often we have to operate in a situation in which we don't have enough data to establish anything with a degree of precision that we would like to have from an academic point of view. And in this situation, I think that it does pay to be a little bit broad, so what I will try to do is to show you a number of dimensions that are all consistent with the idea that Wall Street is becoming less competitive. Now, each one of them can be attacked and, I'm sure, that in the debate will be attacked, but I want you to, at the end, look at the big picture and, say, use my favourite Ockham's razor and say, yes, you can add one story for each market, but what is <u>the</u> one story that puts everything together?

So, let me go through some of these stories. The first one is the number of IPOs, and here we're talking about domestic IPOs of US companies in the United States. And this are very low. They're particularly low if we look at the business cycle standard. In a sense, the level, if you look at the graph, is barely above the level of the previous recession in 1989, 1991. But it's not only below the entire 1990s; it's also below the 1980s. So, it's below every moment in which the market was doing well. So, in the, in the business cycle, we are in a situation where normally you see a lot of companies going public; you don't see that in the United States.

And this is true whether these are companies, independent company. It's to some extent even more true if are VC-funded companies. So, it looks like even VC who are the most savvy and knowledgeable investors prefer not to take their company public. And you can not certainly attribute this to lack of activity. There is always a delay between the time of funding and the time of take to market. VC funding has been very active, especially in the late 90s. We would expect, in the early 2000, a lot of companies take it to market; we don't see that. So there is a gap of IPOs which is present.

On the flip side of that is that there is a surge in their buyout activity, which is at unprecedented levels. So, not only companies don't want to go public; companies that are public want to go private. No matter the way you look at it, the US share of global IPOs, i.e., of companies that have gone public in other markets and have shown an interest in trying to list in other exchanges, has dramatically dropped. If you look at the 1999 level, by volume, the United States had 50% of the volume; we're down to less than ten. By number, 30%; we're down to less than ten. And, sure, London has gained only a little bit of that, but the world is not composed of only London and New York, I'm sorry to say. There are a lot of other de facto financial centres that attracted the interest of these companies. And the fashion of foreign companies that are listed has increased dramatically.

Now, the 2007 is extrapolated on the basis of the number at the end of August but, as Chairman Cox said, once the door was open, a lot of them left, and a lot of them were very happy to leave. And we're not talking about minor companies that have nothing better to do; we're talking about major companies like BASF, Suez, the Australian and New Zealand banking, Swiscomm etcetera, coming from very well-established countries and countries, I would say, that enjoy a very large listing premium. So, if the listing premium that is the main indicator that René uses is really indicator of how attractive this place is, we don't understand why companies coming from countries with huge listing premia, the moment they have the door open, they run away as fast as possible.

This composite evidence is quite suggestive that there is a loss of competitiveness in the US capital market. But the paper that René has with Doidge and Karolyi, and the ideas that he has championed also here, are quite the opposite. And if I can summarise the points of his presentation; number one, cross listing has been falling everywhere, here and also in the main market in London; so we shouldn't be worried about the loss in cross listing. The decline is due to a change in population that is interested in being cross-listed; so we're doing nothing wrong because our traditional customers are happy with what we offer to them. And there is still a large premium in being listed in the United States. Yes, maybe it's dropped a little bit, but not a big deal, and we're still persistent; so people should be coming and should be happy.

Now, it's true that the London main market has lost shares. It's also true that, overall, the London share has increased, and maybe the new customers are different in a sense. You know, people now prefer the iPhone to the old cellphone. If I say that all the traditional customers that buy the cellphone still have 90% of the market share, it's not a big consolation if the market has changed. So, saying that New York is still able to attract its traditional customers is not a recipe for success; it's a recipe, oddly, for decline.

I am going out of my character, because I know very little about basketball, but it is true that the Americans know that the 'dream team' was the best team in the world, and at some point they started going around, competing with other team, and lost. They lost not only to the former Yugoslavia or Spain, that had a very strong team, but they lost to Australia that didn't even have professional players. And everybody was shocked by that; the reality is that the game has changed, and the American team had not, and they didn't understand that. And so, saying that we are still the best at playing the game the old-fashioned way is not really counting in a world that is becoming globally competitive.

The strongest point of Rene and his co-authors regards the listing premium. It's very important to understand how much of this is premium is actually proxy for the bonding hypothesis that is so dear to René and Jack and other people, and to what extent is it capturing other things. Global opportunities or, as I will say in a second, other dimension. So, maybe this is too early for anybody to know this, but this is the cross section. These are René's data, so I took the data that he posted on the NYSE of the listing premium by country and I just glance and say, does it make sense?

At the top of list, I emphasise in red, the countries with the largest premium are countries like Switzerland, of all places, New Zealand, and Australia. So you would really think that Australian companies benefit, like, 60% by bonding in the United States, while companies from China and Mexico and South Korea, where we think the problems of corporate governance are pretty severe, they seem to benefit very little from listing in the United States. So, is the listing premium really the best indicator of the value added of this building (the SEC) and of US enforcement? I'm not so sure.

Then let's look at the cross section of valuation of the listing premium. It is absolutely true that there was a peak in 1990, then it dropped, as René said correctly, and maybe we can attribute this drop to a lack of confidence in 2001, 2002. Then it went back up a little bit, but not to the level before. And you can tell a lot of stories until you plot the behaviour of NASDAQ. And basically the listing premium is one-to-one correlated with the behaviour of NASDAQ; so is it really a measure of bonding?

Fortunately, we can tell the answer, because we have the perfect control experiment. Prior to the unification in July 2005, Royal Dutch Shell was actually a dual-listed company. As a result of a merger done at the beginning of the 20th century, there were actually two stocks traded: the Royal Dutch and Shell. And the beauty about the stock is that they were exactly the same stock with just two names; so, you can't say that there are benefits of governance, because the governance was, first of all, set out back in the Netherlands, and was the same for the two companies. Nothing was different. The only thing that was different was the Royal Dutch was traded mainly in the US market and was part of the S&P 500, and Shell was traded mainly in the United Kingdom. We would like to believe in finance that there will be no arbitrage conditions; that the two prices will be the same. No way. The two prices were different. And they started, in the early '80s, with a 30% discount, and they ended up - this is up to the end of the 1990s; this is from a paper by Ken Frewett and with a 10 or 15% premium.

So, can we really attribute the 15% premium of Royal Dutch to the bonding hypothesis? Of course not. This is clearly a market segmentation hypothesis due to the fact that the Royal Dutch was in the S&P 500, and that creates some price pressure for stock in the S&P 500, and then brought to the increase in the listing in the spring. So, we have to be very careful to use this listing premium as really an indicator that everything is alive and well, because this example of Royal Dutch Shell suggests that this is not. So, I think that the conclusion is that the work of René, which is really interesting work, does not really say anything about the competitiveness of the US capital market. It's simply saying, is New York doing as well as it used to do? Yes. And is there a premium for people coming here? Apparently there is, but we don't really know fundamentally what the reason for this premium is.

So, I think that the issue is not if the US capital market is losing ground; the more interesting issue is why it is losing ground. And here, I think that I am much more agnostic on this dimension, because I think that there are a lot of possibilities and, honestly, it's very difficult to disentangle between these possibilities because, as I said, time is too short, and there are too many data, and too many things take place at the same time.

The first rule that they teach you in graduate school is basically, don't try to identify anything out of a time series when you have one event history, because there are too many things that change over time. And that's indeed the case. So, one possibility that we might dismiss is that this is the result of what I call a hangover after a boom, is that the United States are probably the best market for technology stocks.

What we observed during the late '90s was a boom in technology, of course, and this made the US capital market very attractive, so everybody rushed to list here because they wanted to be part of this boom. Then, of course, we had a dramatic correction in 2000, and that explains the bust afterwards. Fortunately this is something that we can, I think, dismiss, because if we divide the US share of the global IPOs in the high-tech market sectors and non-high-tech sectors, we see that the drop is pretty seamless. So, this is the drop in the high-tech sector; this is the drop in non-high-tech sector. So, if anything, it's actually more pronounced than the other one, that doesn't seem to be, really, the explanation.

The second story, which I think is intriguing, is saying, you know, we don't actually care that we're losing ground, because that's what we want. After all, regulation is designed to keep the bad people out, so if the boom is made out of dubious Russian and Chinese companies with bad corporate governance, the fact that they are listing in London and not in New York should be a compliment to the SEC and to the US regulators. They should be delighted that they don't even try. But the reality is the US share is dropping even if we restrict to developed countries where the standard of corporate governance may not be perfect, but is not as bad as in some emerging markets.

The third story, which I think has much more appeal, is the story about liquidity. And this is a little bit like the US basketball team. We thought, as Americans, that we're the best and, you know, the other people learnt the game. I think that there was no question in the '80s and early '90s that the NYSE and the US capital market were by far the best. I remember when I came to this country in 1988, the Italian stock exchange, at that time was called Borsa di Milano, was pathetic, and nobody would even think about trading a stock there if it could trade anywhere else. I think the world has changed, in part as a result of the fact that 30% of our MBAs are foreigners. We taught a lot of what we do here to a lot of other countries, and the other countries have improved. So the liquidity in other markets has become much more attractive and, as a result, if you have a dually-listed stock, it used to be the case that you were trading most in New York, like, the Royal Dutch, because we're so liquid; now, you mostly trade in your domestic market.

I've taken this from a paper by Marco Pagano. They are in aggression trying to explain what drives developing volume in the US domestic market - for companies that are dually listed. And they have the calendar year dummy and this gives the time trend. So, you see clearly from this that, in the '80s, there was an overwhelming fraction of the volume taking place in New York, and in the '90s this has been dropping dramatically. And this is not a SOX phenomenon, is not a 2001 loss of trust phenomenon. It is a steady decline due to the fact that the other guys got better and, when the other guys got better, we lose market share.

And this is perfectly consistent with the reasons that the people who de-listed got, in a sense. I went and collect the reason for de-listing for the 44 de-listings that took place this year that were not associated with mergers or other reasons. 52% of that said that the low trading volume did not justify the cost of listing in New York. So, we don't get a lot of trading volume, it costs us money, why should we be here? I don't know what you call this if not loss of competitiveness. And the other one, just, just for completeness, 60% say reduced complexity. Another one had 18% reduced cost. Another eliminated report of requirements. So, I think that people are very adamant about the fact that it is costly to stay here; we want to get out.

A fourth hypothesis that does not play a lot of role in the press, and not even academic studies, but I think that that is interesting, and, and ideally we can test it, is that part of the reason why people were coming here to list, especially when you were in technology, or in difficult sectors to be listed in, is because there was an expertise in the marketplace. Because if I have an Internet company and I try to list in my local exchange, nobody knows anything; but, if I list in New York, people would be able to tell whether I'm worth anything or not.

There is some evidence that, in the '90s, when companies were cross-listing, the number of analysts following the stock would go up. And, in fact, people have linked the surge in price to this particular phenomenon - the increase in the number of analysts, which suggests that this was an important reason, why they came here.

We know from other sources that the number of analysts following a stock in the States has dropped dramatically. In part, this is the result of the global research settlement, in part of regulation, in part, maybe of other reasons, but it definitely has dropped. What people have not done, they've not put these two things together. And I cannot do it, because I've not done the analysis, but at least from a logical point of view, it seems to be reasonable to say that maybe that might be a reason.

Now, in terms of regulation, that is the one, as René said, has attracted the biggest interest. And I told you that, in graduate studies, when they tell you not to identify anything out of time series, is to say, basically, the cleanest way to identify an effect, if you can do it, is an event study. Why? Because an event study is a very precise and very small window, so you can separate this particular event from other events. And, actually, Litvak has done that for SOX , and has done that in a clever way, because all US companies, sooner or later, will be subject to SOX, but when SOX was passed, there was some uncertainty about the status of foreign issues.

The good thing about a foreign issue is that we have a good control sample, which is basically the same sample as René used, is the sample of similar companies that are not cross listed. And so if SOX was very beneficial to bonding and to the US market, when information was coming along that was more likely being imposed on cross listed companies, the price would go up. If SOX was not beneficial, the price would go down. Now, what Cave finds is that, actually, the price went down. To be fair, is not a huge effect. So, I don't think that, if we think about the big picture, lots of competitors in the US capital market, I don't think that this alone is the cause. But clearly, I think that the more precise evidence seems to suggest that this might be the effect.

And even using René's data, if you don't look at the level, but if you look at the change - and it's true that the change by itself doesn't explain much - but if you relate the change with the level of governance of the country that the company's coming from, there is a pretty strong indicator on the X-axis here, i.e., the control premium, the inter-control transactions, the biggest is number is Warsaw's corporate governance. So, countries with very bad corporate governance, when SOX was passed, the stock price went up, which makes sense because, if you're a country with good corporate governance, more control is better, but if you're a country with good corporate governance, when the SOX was passed, the premium went down, which is consistent with SOX means good for developing countries, and not so good for developed countries.

Of course, there is another element that we often forget, but is important, and it's the exposure to liability, which makes being in the United States not particularly attractive. Now, this was true even before, so you say, why, all of a sudden, is this important? And the reality is, because all of a sudden, the risk is materialised in a much more dramatic way with an enormous increase in settlement with the size of award that sky-rocketed, and with two or three episodes in which, for the first time, directors actually paid out of their own pockets. Believe it or not, they paid out of their own pockets.

And so, all of a sudden, if I'm a director of a company in a foreign country and I'm considering listing in the United States, this might be the most beneficial act for the shareholders I can think of, but I will think twice, because I am personally liable, or I run the risk of being personally liable. So that contributes to make things less attractive.

And last but not least, this is something that, as economists, we try to ignore, but if you talk to business people, I think it plays a huge role, is that the political climate after 9-11 did not clearly help the competitiveness of the US capital market. There is hostility to foreigners, especially to Arabs; there is the difficulty of obtaining a visa that makes it not particularly attractive for people to come and work here. And also, for people with money to come here and consider this as a place to invest their money, fear of expropriation. If I am in a rich oilman, I prefer to keep my money in London than to do it here.

But also - and this maybe is to the credit of the United States for their enforcement - but if I'm a rich Russian, I prefer to live in London than to live in the United States. And, and so I take a lot of the business here.

Finally, there is a hidden cost of disclosure. There was a CEO of a very large European bank, who is personally still in New York, who said - this was before the SEC changed; let's see whether you will follow up - he said, the moment I am allowed to leave, I will leave. And this is not because of SOX; it's not because of anything else; it's because, when I disclose - because I am within the SEC rules - my geographic area of business, Iran pops up. And the next day, I have the CIA all over me because I do business with Iran. And the cost of that is of my time and my business to follow up on this CIA investigation is just too big for me. If I can leave, I will leave tomorrow.

So, the conclusion is, I think that, in my view, there is no question that the US capital market has become less attractive, and I think that most of it has nothing to do with regulation; however, if the only problem was that the NYSE is not fast enough in changing a trading system, I don't think that it is our role as academics, regulators or policy-makers to discuss that; that's the NYSE problem, and I think that competition there will drive things better. In fact, when I was going through the reason of de-listing, some companies were saying, I already listed in some electronic exchanges; I don't need the NYSE. So I don't think that I am particularly qualified to judge what they should or should not do, and I think they will do, actually, the optimal thing if they're smart enough.

So, that's not my problem. What is my problem is if there is bad regulation intending in a broader sense, including liability, etc, and my view is, we, as Americans, had the luxury in the past to be so much better than everybody else that, even if you hadn't the most creative offering, you will win anyway. In a sense, I think when the dream team with all the best players went to the Olympics, they could have won with one hand tied behind their back, because they were so much better. It's not true any more. The basketball team loses to foreign competition; the US capital market is losing foreign competition. When you are in that system, then you have to look at every little detail, and make sure that there is nothing that keeps you down. And that's why it is so important to look carefully at all these dimensions of regulation to make sure that they don't hamper US competitiveness.

Thanks.

Questions & Answers

Ethan Burger Adjunct Professor , Georgetown University Law Center
One of the things, I teach international economic crime. And one thing that no-one discussed was the USA Patriot Act and its equivalents overseas, and the role of international organised crime, and I'm wondering, your sense of the illegal market - dirty money - on this whole topic.

Rene Stulz
If I understand Luigi correctly, I think we should abolish the Patriot Act, because that would keep at least one firm listed in New York. I do think that concerns about security are going to keep some people outside of dealing with US financial institutions. There is no question of that, but then the question is, what is the national interest? That's going to trump what we would call competitiveness of financial institutions.

Luigi Zingales
I completely agree with René that we're not qualified to judge the Patriot Act on the basis of financial implications; however, I think it is important to be aware that this financial implication might exist. It is also to know that there is, besides the security trade-off, there is an important trade-off between attracting everybody and attracting the people you want to attract. I think I'm completely in agreement with René that we do need some bonding, we do, do need some regulation, and we don't want to give up competing regulation to maximise market share. I think that would be a mistake, because there's a lot of money that is not managed by people with ethical principles - just to use an understatement - and we as a society have to make a collective decision of how much of that money we want here. I think probably none. But we have to realise the fact that having none, we're going to let other people gain market share. And, as I said, this may be a good outcome or a bad outcome, but we should be aware of that.

Andrew Clearfield President, Investment Initiatives
I'm one of the governors of the ICGN - International Corporate Governance Network - and we are having a conference in New York on Monday, October 29th, which will also be dedicated to this issue, but primarily from an investor point of view. The topic is: what investors want out of the US market, and US market competitiveness. I just wanted to call this to everybody's attention, and you are all invited to look at the ICGN website, www.icgn.org, for details about our conference, and you're all invited.

Rene Stulz
I agree with a number of things that Luigi said. If you listen carefully, we are not that far apart. When he came to regulation, he didn't have much to say about SOX. Mostly what he had to say was the evidence that he found to be most favourable to his claim actually showed a very small economic impact. It's not clear about how far apart we are.

His starting point was to talk about Wall Street, and that it has become less competitive. That's different from what we focus on: we focus on the exchanges. Has Wall Street become less competitive? It seems to me a much harder claim to make than for the exchanges. If you look at the market caps, if you look at the profitability of US investment banking firms, I don't think that they have trouble competing with the rest of the world. And if you talk to some of those people, they really don't care about the New York versus London controversy, because they can do business anywhere.

I didn't see his graphs where I was sitting. There's no question that the number of IPOs has been low, but to really understand that number, you need to have a model that predicts how many IPOs we should see, a model that explains what happened in the late 1990s. Is it that we had too many IPOs then? If you look at the composition of firms listing through IPOs during that period of time, the typical firm had no profits, and that was a change in standards.

There are lots of questions there. It may well be that it has become harder for very small firms to have IPOs or to find it worthwhile to be public. That would be a worthwhile discussion to have. It's not clear to me that it's a discussion that has much to do with NYSE and NASDAQ. It may be a discussion that has a lot to do with AIM versus OTC. It's a discussion worth having.

He says that the global share of IPOs has dramatically dropped. I didn't see which data he was using. We have had some controversy about the data on this issue with him, and so I look forward to seeing the data that he had. He used basketball analogies; I would use the country club analogy. If you want to maximise the number of members of a country club, you set the fees to zero and you open the doors. The question is, is that a country club that people would want to belong to? Probably not. He talks about the fashion of firms that de-listed. He talks of firms with high-listing premiums. We have been looking at the firms that de-listed, and obviously we'll have to reconcile our data with his on that, because we find quite different results, and we find a lot of firms leaving that are firms that have done quite poorly.

Then he talked about iPods, and people liking iPods, but that's, now, whether London as a market is doing things right as compared to New York as a market. That's an industry or organisation question which, to me, has little to do with competitiveness of the US in general. Now, it may be that the New York market should have organised itself in different ways and made itself attractive for tiny firms like AIM did, but that's really a very different question to me.

Then he had quite a discussion of the cross-listed premium. It's important to look at that premium controlling for all of the characteristics of firms. He focused on the war premium,. The premium is there, but obviously, when you don't take into account growth opportunities, when you don't take into account a number of those things, it's not surprising that you get results that sometimes are counter-intuitive. What he didn't say is that there is a whole bunch of papers in finance by a wide variety of authors that have worked at making sense of the premiums using the theories that I talked about at the beginning of my talk, and that these papers find considerable support for that theory, and find support in terms of the decision-making of firms. For instance, in a paper we found clear evidence that firms where the controlling shareholders own more votes than they owe cash flow rights, which would be firms where agency problem would seem to be prevalent, that those firms are much less likely to list in the US, which is completely in accordance with the predictions of the theory that we are talking about.

He talked about liquidity. I think there is no question that foreign markets have become more liquid, have become more comparable in their operations to the US market, that in some cases they actually have become better in, kind of, the logistic of exchanges. But again, that's an industry or organisation question, and it's not surprising and it's good: not that you would see governance improve abroad, it's good that you would see technology improve abroad. So I really don't have this mercantilist view that somehow everything should take place for the US in terms of international capital markets. If we look at the volume of trading and financial transactions in general, the amount of it that takes place with the US investment banks is just enormous. Most of the derivatives market takes place that way; most of the structuring market takes place that way. So those firms are very competitive, and that's where the wealth gets created for shareholders. He mentioned the Litvak study, and she has three of them. The most recent one, she actually finds that the premium did increase after SOX. She finds that it increases somehow more for 144(a) and OTCs than it does for exchange-listed, but she does find it increasing for exchange-listing.

So I find comfort with that, because it's really supportive of what we have.

Luigi Zingales
René is absolutely right that we don't disagree on much. It is definitely true that we both think that SOX cannot be the only cause of the problem. But I think we do disagree on the general trend of competitiveness, and I don't understand this playing with words.

I'm not saying that Wall Street investment banks are necessarily at a comparative disadvantage, but I think that, collectively, the US capital market - NASDAQ and the NYSE - seem to be less attractive for foreign investors than they used to. That's my position, and he seems to think that there's no problem.

As I said, most of the evidence that he collects on this dimension is, number one, that New York still is attractive to the old customers, which from a marketing point of view, does not seem to be a very smart approach; and number two is the listing premium. Now, I never said that there's no evidence that listing premium has anything to do with corporate governance. I think that it is obvious that there is a corporate governance benefit in coming to this country. There are some studies that find some correlation between the two things; so some element of that premium is important.

However, I don't take comfort from the fact that the premium is still there as evidence that the benefits are still there, because the concrete example of Royal Dutch Shell. For Royal Dutch Shell, the premium was there, but there was really no substance behind the premium. So, I think it is incumbent upon his study to show that that premium that is still there will be useful, and I think that the direction he's going into, which would be very useful, is to see, for example, how big was the premium of companies that chose to de-list.

If the companies chose to de-list at a negative premium, then this might indicate that, indeed, the premium is suggestive of that. If not, then, then it's an issue. Now, I don't know, and I'd be eager to read this new paper by Kate Litvak. The one I read was pretty clear in that direction. I don't think that the magnitude is huge but it is there.

René is absolutely correct in saying you have to trawl for company characteristics. When he does that properly, the premium of the US market become tiny - it becomes 8%. And, surprise, surprise, there is a premium also for the OTC, which is 5%. I'm not so sure, then, this bonding hypothesis has so much support in the data once you do what he claims you should do.

Rene Stulz
Just on the last point, he mentioned that when we can trawl for everything, the premium goes down to 8%. That's, that's not really the right way to look at those regressions. We discuss the possible interpretations. One possible problem with that regression in the paper - technically it's a regression with fixed effects- the problem with that regression is how the fixed effects are identified.

A more reasonable interpretation of that regression is when you stack the deck as much as you possibly can against our hypothesis, it's going to be more than 8%. One example of stacking the bank in this is that we compute the premium starting the calendar the fiscal year after the listing. So all the anticipatory effects are removed from the regression. If we change the regression to include that, we immediately already have a 50% increase in the premium, still using this fixed effects methodology that has a number of problems in this.

Arthur Wilson Associate Professor, George Washington University
In the debate that has followed since Sarbanes-Oxley, I think your November study, Professor Zingales, there's been a lot of talk about whether or not Sarbanes-Oxley has harmed US markets, and it seems that you, you will agree that if there is harm, it's not that big - perhaps there's no harm. If it's not SOX, and you both agree that bonding is important, why are we talking about weakening SOX? Why aren't we talking about improving the regulation to improve the bonding, to basically improve the brand, and we should be talking in terms of fine-tuning it rather than backing away from it?

Luigi Zingales
I completely agree. I don't think that we want to back away from it. I think that we definitely need to fine-tune it. I think what the SEC has done to increase that fine-tuning was useful. My view is that there was a very dangerous combination of Section 404 that I think is not that *per se*, but gave an enormous power to accountants at the moment in

which accountants were scared like hell from what happened in the past, and they're not really paying the consequence of their crazy behaviour because the market is not competitive. And if the market were more competitive and you behave in a crazy way, people don't use your service any more. But they have a monopoly in this moment in that market, so they can do whatever they want, and so there is no correlation between the benefits of the scrutiny that is there, and the cost. I think that is the part we want to back away from, and I think that any measure that would make that market more competitive would be very much welcome.

John Coffee Adolf A. Berle Professor of Law, Columbia Law School
I want to go back to Luigi's arguments. I'm a little bit biased, because I think I'm the person who coined the term, 'bonding hypothesis', ten years ago, and that gives me some incentive to try to defend it. The principal piece of evidence that you were citing was for this anecdote about Royal Dutch Shell, which has two companies, Royal Dutch Petroleum, and Shell Transport and Trading, and you were saying there was a difference in the listing premium: it was there in New York; it was not there in London.

So far, you've all been talking about corporate governance, but this afternoon we're going to get into the variable of enforcement intensity, and there's a heck of difference in the level of enforcement intensity in New York and the US versus London and the UK. That can be a factor; there are ways that you can explain a premium in New York and not a premium in London, because one of these companies is subject to a much higher level of enforcement intensity. Given this anecdote, there are interpretations for it - whether right or wrong, I don't really have a theory - but I'm not sure that one anecdote really disproves all of René's data about listing premiums.

Luigi Zingales
No, you're absolutely right. First of all, it's not an isolated anecdote; there is a paper by Ken Frewett in Journal of National Economics, 1999, where he looks at all the dually listed companies. I grant you there are not very many, but all the dually listed companies have these two characteristic. There is a valuation in that, and the premium tend to be correlated with the bullishness of that market; so they move very much with, for example, the S&P etc. This is what you observe, by the way, also in the US market. The listing premium is very high correlated with the excitement of the US market as proxied by NASDAQ.

So, I think this is something that should give us some pause. I'm not saying that this tries the bonding hypothesis. I think that the idea of bonding is a very fair thing. I would like to see more evidence of this bonding in place.

First of all, I think that, even in René's data, people should be more clear. My understanding is that, if you are OTC, some OTC firms are subject to enforcement by the SEC; some are not subject to enforcement. So, clubbing them altogether OTC and distinguishing is not the right thing to do. And I think we like to see more evidence in action. How many times has the SEC has brought some serious case against foreign companies, and what was the success of these cases? Maybe this bonding exists, but I would like to see more of the pudding, rather than just the theory.

Rene Stulz
On the latest criticism here, we don't put them altogether. It turns out that there are none in one pool and all of them are in the other pool; so, in that sense, there is no issue whatsoever.

Luigi Zingales
How do you explain that even in the most conservative measures you define without this effect, the OTC firms show a listing premium in the United States? If all those firms are now subject to the SEC, and the premium is 5% versus the 8% of the market, I bet that difference between five and eight is not statistically significant. So it's saying that most of the premium, in the most conservative measure, is not associated with this building (the SEC).

Rene Stulz
That's another misrepresentation.

The premium is significantly different between the two. There is an interesting question as to why there is a benefit that is as large as it seems for the OTC firm. The graphs that I showed are a higher premium when we average it across years. The graph between OTC and the exchanges is quite big with most of the approaches that we use. Now, Luigi talked about analysts. Obviously, firms in the US come under scrutiny that they don't come under, in their home country. Even for OTC firms, we see an increase in analysts following in the 1990s. It's going to be interesting to see how the results change in recent years, but you could certainly see that greater scrutiny is going to lead to a governance benefit, which is part of the theories that I talked about.

Roberta Cooper Ramo
Let me ask you a question about delisting. Luigi, isn't it fair to say that the number of firms that were delisted had something to do with the fact that the gate just opened, and so there was a build-up, and then after that things will slow down in the course of time. And René, I'm curious if there's any evidence that, now that it's easier to be delisted, that foreign companies will feel more comfortable coming in because it's not a lifetime sentence?

Luigi Zingales
I think a similar question was asked to Chairman Cox and he said it's too early to tell. I think that's exactly the right answer.

Roberta Cooper Ramo
But he has to be more careful than you, Luigi.

Luigi Zingales
I think the fact that there were people lining up of the gate to exit is not a sign that it is a very unappreciated country club, to follow this analogy. Whether more will disappear soon, or whether it will be a bigger crowd, I think only time will tell.

That's really the litmus test: to see whether this capital market is attractive. From my point of view, the move of the SEC was correct. I wish that you were much more aggressive in terms of letting people out. I don't think that it works really by attracting more customers in, because I don't think that the market is very competitive to begin with now, but I think it will create the right political dynamics. In a sense, part of the reason why heavy regulation can be imposed is that because people can now leave. The possibility now of a lot of firms to leave will put a constraint on the political system on their ability to impose greater regulation. So, in that sense, it's very good.

Roberta Cooper Ramo
René, any comments about the delisting impact on things to come?

Rene Stulz
I think Luigi's right that we have too little time to see really what the impact of that will be. In my response, Luigi, I didn't discuss one point that surprised me. He was shocked that directors might have to pay if they did commit fraud. I think that that's not a bad thing for them to have to do if actually they did something wrong. If obviously they didn't do something wrong and had to pay, that's really bad.

Luigi Zingales
I'm saying that this creates an agency problem that firms abroad are not going to list. Again, you might say this is a perfectly valid reason for not having these firms here: we want to stick to our rules, because the rules are good. That is the reason why I want to distinguish what are the consequences of competitiveness, and what are the things we want to do, because in this particular case, you want to stick your guns and keep to the thing,

but this will have a cost, especially from cross listing of companies that come from countries where this doesn't take place.

Roberta Cooper Ramo
Well, I've learned a very important thing, which is that empirical finance is not an emotionless subject. I thank you both very much for your papers and your presentations. I thank the audience for responding.