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The role of the bank in Project Financing

My name is Markus Christen and I am responsible for Project Finance at Credit Suisse (hereinafter referred to as "CS") on a global basis. I am located in New York and we have teams of Project Finance (hereinafter referred to as "PF") specialists in New York, that is the headquarter for PF, which is a little bit unusual for a Swiss Bank, and then we have people in London and people in Hong Kong.

What I would like to cover today is quickly give you an introduction. If you can't see it, there is a book there as well, which pretty much follows this outline.

What I would like to do is to give you a quick introduction in CS, what do we do, etc.; then an introduction of what we do in PF. Next point: what kind of an experience we have, what have we done in PF. Then PF in general; what are the concepts which go with PF. How we think if we try to put those finances together. Then there are a couple of elements, which you will find in the package and which I am not going to cover in the discussion this afternoon.

I also have a couple of insurance company issues.

I have seen some other presentations are going to cover this subject, so that I probably won't go too much into detail: the Doswell experience, one project that we had, where there was a case of a turbine, a gas turbine, that blew up and that gives you a certain amount of feed-back on how it is going to be handled by the insurance companies.

New product opportunities for insurance companies where I see a niche for insurance companies to fit in.

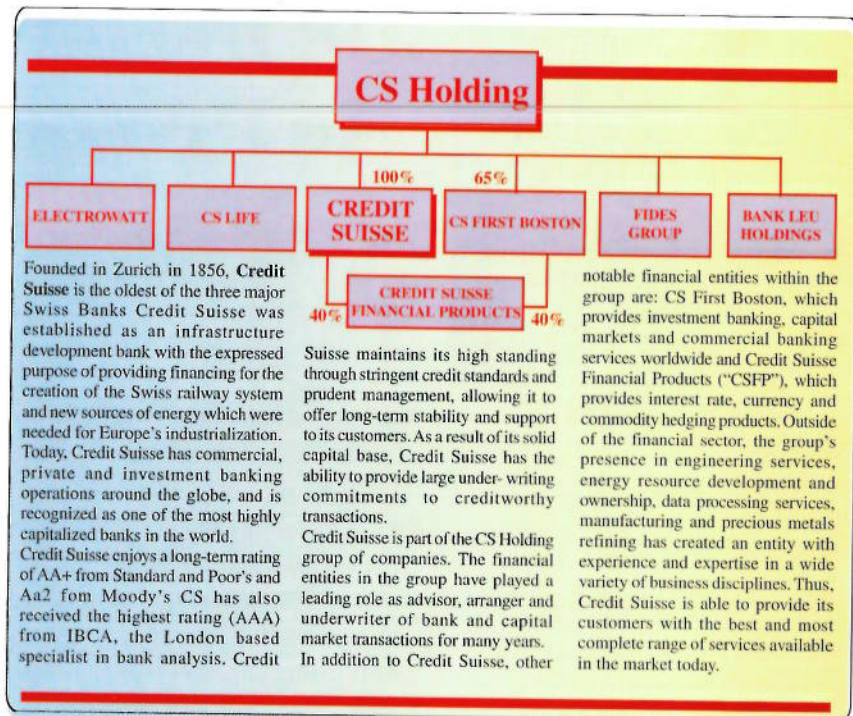
Then, investing opportunities for insurance companies as well: you have all your premiums, or some of your premiums, to invest and it is quite common that insurance companies start to invest in PF as well.

Now, Credit Suisse.

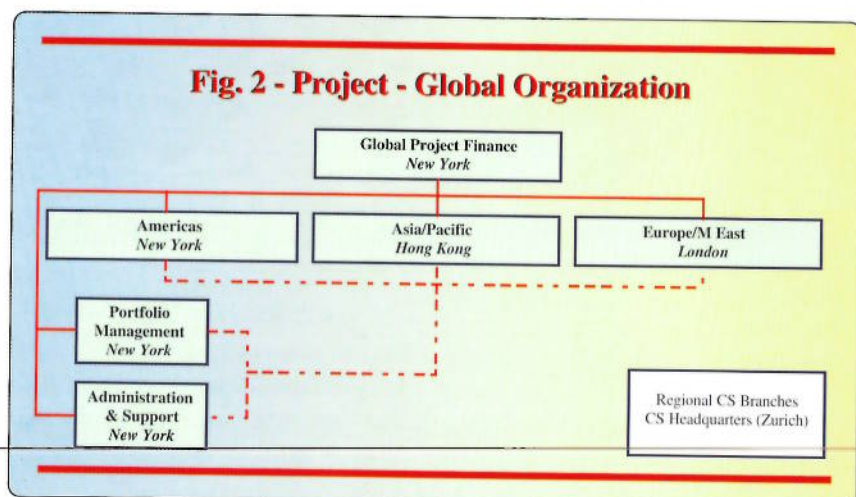
Credit Suisse is organized as a Holding and CS the Bank is a subsidiary of CS the Holding Company, basically 100% owned by the Holding.

CS First Boston is the investment bank owned 65% by CS, we have CS Financial Products which is the group handling the derivatives. And derivatives are important in Project Financing as well, because they offer certain elements to take risks out of a transaction. Then we have all the other subsidiaries which go into CS and since they have a neighbour back there from Swiss Re, CS and Swiss Re are

much much closer since last year than they were before and Swiss Re also purchased ownership interest in CS Financial Products. What does the Group offer?



We have Project Finance and in Project Finance we act as an arranger of facilities, as an agent of facilities and we work as advisors as well. Sometimes we work very close to Credit Suisse First Boston, the investment bank. We do syndications, syndications is basically put things together, restructure deals and then sell the deals into the bank market. Other banks are participating into our projects. We have leasing, we have passive finance, credit finance, but we don't want to go into detail of that today. Investment banking, a product which is covered by CS First Boston: equity placements, bond placements, etc. Derivative products, the CS financial products: retail banking, asset management, insurance, we have a life insurance company and we do market research and industry research, etc. How is our group organized in Project Finance? We



have New York responsible for the product on a global basis and we have the Americas, where the biggest part of the group is located.

Then Asia / Pacific is handled by a group of people out of Hong Kong and Europe and the Middle East is handled out of London. Then we have the group which manages the portfolios of all the assets which we did put together and what we have left on our books? We have administration and support.

Those people are responsible that all the links between those different groups are actually functioning and that the money is viaed out on time and those people have to watch that the money comes back on time, as well.

Then we work together with all the regional branches in the CS network and of course the head quarters in Zurich.

Just quickly to go through the Group. How old is this group in doing Project Finance?

We started in '84 / '85 and the first transactions were closed in '85. In '86 we did the first underwriting as an agent.

Then the first big underwriting was done '87/'88 and in 1990 we did the biggest underwriting we have done so far and we underwrote over half a billion dollars and then syndicated it out into the banking market.

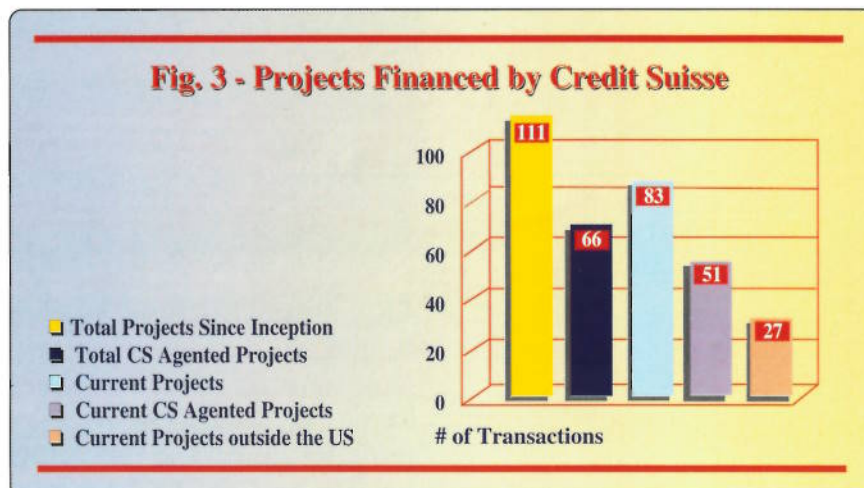
In 1992 we got the mandate on a global basis, then that's some marketing stuff: one of our deals was selected as the "deal of the year" by some magazine, Independent Energy gave us an Award and in '93 we established the presence in London as well.

'94 Hong Kong and in '94 we did also the first transaction in Asia/Pacific.

We have done over 100 transactions this year and that's a chart to show you a little bit what we have in our portfolio and here there's another one.

We have done chemical plants, metal-processing smelters; we have done mining, we have done pulp and paper, pipelines, power generation, which is the biggest part of our portfolio, refineries, telecommunication transactions, transportation, waste.

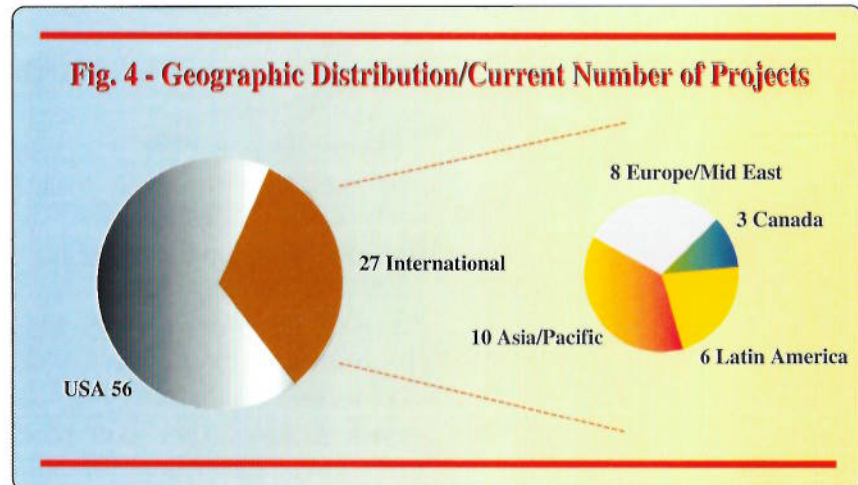
So far we have done over hundred projects in total. In 66 of those



projects we were an agent and 83 projects are still on our books, the other projects were refinanced.

In 51 of those projects we are currently the agent and 27 are international projects, that means they are outside of the U.S.

56 projects are in the portfolio of the U.S. and 27 are international. The international side splits are: 8 projects in Europe / Middle East, 3 in Canada, 6 in Latin America and 10 in Asia / Pacific.



If we look at the total amount of the projects which we have done, if you add up the total costs of those projects, that's in excess of 47 billion dollars and we have underwritten 5.8 billion dollars in those projects. If you look at agent projects, then the sum is 15 billion dollars and about 4.9 billion dollars we have underwritten in those projects. As for the portfolio which we currently have of 83 projects, the total commitment of Credit Suisse to those projects is 2.3 billion dollars.

Fig. 5 - 10 Years Transaction Summary

Since 1985:	(\$ billions)	# Projects	Project Amt	CREDIT SUISSE Underwriting
Total Projects Closed		111	\$ 47.5	\$ 5.8
Total Projects Agented		66	\$ 15.3	\$ 4.9
		# Projects	Project Amt	Current Commitments
As of November 1995:		83	\$ 33.8	\$ 2.3

That means loans out of those projects and commitments for future bonding.

Now we start, what is Project Finance? What do we look at, if we speak about Project Finance? It's the lending to a single purpose entity for the acquisition or the construction of a project and we don't have recourse to the sponsors, except

for the equity which the sponsors have put into the project. That's the definition, that's what we understand under Project Finance or if we speak about Project Finance.

How is the loan being repaid from those assets?

The assets which we finance produce a cash flow and only the cash flow is for the repaying of our loan.

That's why we are very sensitive to an analysis of the project.

There are no deep hopes around to repay us. We take security, we basically nail down all the assets which are around.

That's the contractors' rear work of the project.

Those are the real assets, mortgage on the power plant, the mortgage on a refinery, etc.

We get the pledge of the equity, the shares of the entity and we get an assignment of all the contracts which the project has entered into, that basically summarises it. If we look at the different steps, we start with an identification of the project and there's an allocation of the risks and resources, for asset project is a long-term commitment to work on.

Some of the projects are done relatively quickly; if I say quickly, I mean probably 5 months, that's very, very quick.

It could go a year, two years or three years until the project is finally closed, so it takes a long-term commitment from our side to get those deals done.

Then, the project consists of different risks and we distribute those risks to the parties who are hopefully best equipped to handle them. Then the sponsors go out and basically get vinding for a power plant for example, mandate contracts to the parties responsible to build the plant.

Fig. 6 - League Tables

Lenders - New Projects- 1994

Credit for Participation Amount

Rank	Company	SMM	Issues
1	CREDIT SUISSE	726	15
2	ABN Amro Bank	642	17
3	BA Securitiez	432	8
4	Banque Paribas	336	7
5	Barclays Bank	326	7
6	GE Capital	286	5
7	Sumitomo Bank Ltd	262	13
8	Fuji Bank	254	11
9	Credit Lyonnais	226	7
10	IBJ	217	6

Lenders - Restructurings/Refinancings- 1994

Full Credit to Agent

Rank	Company	SMM	Issues
1	CREDIT SUISSE	654	1
2	GE Capital	630	1
3	Sanwa Bank	575	1
4	Goldman Sachs	505	1
5	Banque Paribas	457	3
6	Union Bank	439	2
7	Sumitomo Bank	325	3
8	Salomon Brothers	310	1
9	Canadian Imperial Bank	302	1
10	Swiss Bank Corporation	270	1

Source: Independent Energy/March 1995

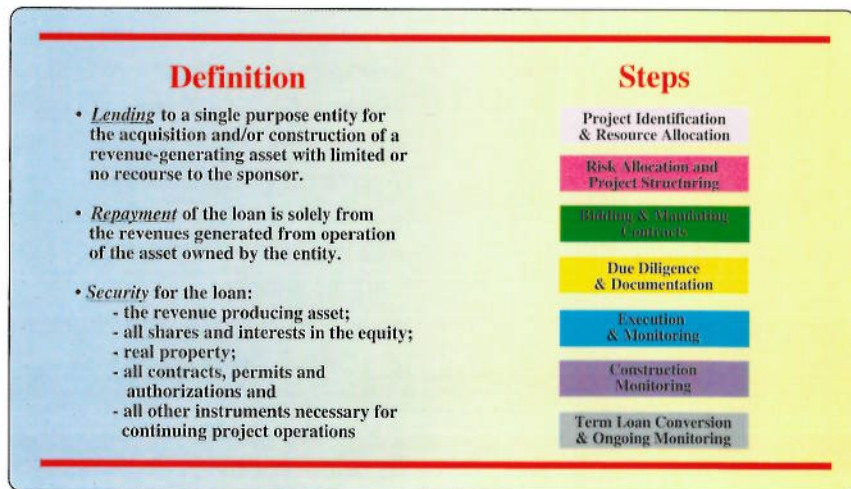
We start our operations to look at the project, to have engineers working on it, to have different parties involved, resolving different special deals we need, to basically define the project and determine that it is a good asset that we can lend money against the future cash flows. Then, we execute it, that means we put the loan agreement in place, etc. We syndicate it and, of course, we have to start the

monitoring project of this asset. There is a lot of involvement of the bank during the construction period of a project with monitoring where the money is going, how the road grounds work. So the bank is very, very much involved in an agent position in those projects.

Once the project has reached completion, we have reached the milestone in risks as well.

The completion risks are gone and now we have to look that the asset is actually performing, so that the loan is going to be repaid and that's to be watched very, very carefully.

Each of those projects which we have is basically like a small company. It needs to be watched, it needs to be looked after.



The benefits of the Project Financing: there are benefits to the sponsors. You can enhance your return, the risk is diversified and for a big corporation sometimes it makes sense to go non-recourse, because they preserve the borrowing capacity which they need for their corporate business, their regular business.

Another point is access to long-term capital. Long-term capital is not normally accessible for big corporations, but if you use it with this Project Financing scheme that's possible. So you can go out 10 years or 15 years which otherwise wouldn't be possible.

There are benefits to the local community, but I'm going to skip those. You all have heard about the privatisation process, because some of the governments have project constraints, so a lot of things are going to be done and/or are already done on the private finance initiative by privates instead of governments.

If we analyse a project, I think that's probably one of the most important parts.

We have to make sure that all the risks are identified.

If we miss risks, then we don't know what we are getting into and that might be a problem. There are three big categories of risks and this list is not exclusive. There are other things which go on this list as well. There's the performance risk and what I want to emphasize here is the proven technology. PF is not an instrument to do unproven technologies, new technologies. That's not going to work. PF is not venture capital.

That's something completely different, sometimes people understand the project as something new, but that's not what is going to be financed on a PF basis.

The next big risk under the construction period is cost overruns. We have to make sure that the project is going to be completed within budget.

Because there's no additional money coming from anywhere once the budget is set, we know how much equity goes into it and how much the banks are ready to lend. To mitigate this risk we can do different things. I think the biggest component of it is a turn-key contract where one entity, one contractor is responsible to build this power plant or this refinery and he has to be finished within the budget, otherwise he takes the risk, if the costs are going to be higher.

If the project is not going to be finished in time, we have time delays and time delays cost money, because the project does not start to produce cash flows, which is one problem and the debt which is outstanding incurs interest, so you'll have a bigger amount of capitalised interest and that can be a problem as well. That's why the contractor is normally on the hook for performance and he's on the hook for timely completion. In the operating period we have similar amount of risks and it is in the operating period when the plant is started up and starts to produce. That's why we want to make sure that the operating agreement, the way the plant is supposed to run, is really according to what everybody forecasted and the list of items you can see here you might read that half the words are mitigants.

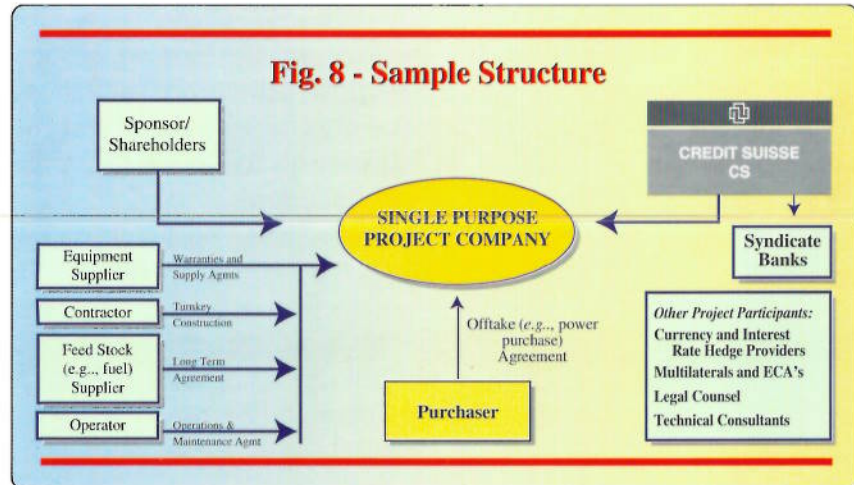
How do we mitigate those risks in the process? If we produce something that's a sales risk, and the sales risk is going to be done on a contractual basis because we are going to know where the cash flows are coming from and that's why we need a contractual framework to hold this project together. We're also going to know that whoever is going to buy the product is somebody who has credit worthiness, otherwise the contract is not worth that much.

Another point which we always have to consider as well: if a power plant is financed, a mine is financed, we want to make sure that this mine or this power plant is actually a low-cost producer, because then we know it could compete in the market place without the contractual framework which we put around it.

What are the fundamentals to maybe look at the project?

I mentioned it before. We need to have the parties on the hook for those risks, the parties who are best equipped to handle the specific risks, and of course we need to know that all those risks are actually properly identified.

We want to have a contractual framework where all those contracts neatly hook up into each other, so that we can actually go and forecast the cash flow of this facility and if we have a cash flow that's one thing you can do many many cash flows and you'll never know how is the future really going to look like. That's why we need predictability of those cash flows, otherwise they are really worthless. Finally, we have to look at the macroeconomics of the project as well. Is this project needed?



Is it an asset which is going to have certain benefits to a certain geographical area or to a country in terms of power production, if we look at Third World countries, emerging markets, etc. So we should never forget to really put it into the bigger picture and whatever we do, we need common sense to look at this stuff and how we address it and how we approach it and how we mitigate risks.

I'll show you a structure of a typical project.

It's very, very simplified, but it has all the elements which should make a project work.

We have the sponsors, the shareholders, the people who own the project and the first thing you need to have is somebody around who is actually going to buy product which is going to come out of this facility, otherwise everything hangs up in the air. Then, once you have those two elements, you can form a single purpose entity, a new virgin company which is formed to basically be the project at the end of the day.

Then we will get into the plane as a bank and help structure the project, handling what is needed on the financing side to really make it work.

Then we have the supplier. We have the equipment supplier and the equipment supplier is going to be the major contractor which supplies the hardware for this project.

We need the contractor in the whole picture and of course we need the feed stock, whatever you produce. If you do a refinery, you need the oil, if you do a mine you need to know if actually the ore or the copper or whatever you want to take out of the ground is actually in there. If you do a power plant, you need to know where is the fuel coming from and what are the costs for the fuel.

We need somebody who is going to be in charge to operate the facility on a long going basis, that has to knowledge and the expertise to really handle that.

Once we are done with all those elements, which is really very simplified, we have a facility and this facility is going to be closed and is then syndicated out to participating banks.

There are other elements which you can use to mitigate the risks. If

we do a project in Indonesia we probably need political risk insurance to do that, so we need the E.C.As. involved, the export trade agencies or the World Bank or somebody like that.

We also need a lot of technical consultants which have specific knowledge in certain areas to really give us feed-back to help us structure and mitigate the risks.

Of course you need legal counsel to put all the documents in place, etc.

Just quickly some future trends which might be of interest to you as well. In PF we have a situation where the bank like us actually would add the most value, that's in the construction phase, to structure the project and to really put it together and to be there to fund the project during the construction period.

That's where we, as a bank, are most efficient. Are we efficient lenders to projects for the long term, for 10 years or 15 years? No, we are not. There are other sources of capital available to do that and one source of capital is money from insurance companies, for example, some new developments in the market. The rating agencies Moody's, Standard & Poor's have started to rate projects, to give them a credit rating, and if you get an investment rating from Moody's or Standard & Poor's, the project is well on track to access other sources of capital. That's one 144A rule which is a semi-public offering in the U.S. or you quote basically, the public bond market to place paper.

Sometimes, capital markets can be accessed through unrated projects as well, through high-yield jump bond offerings.

But that's normally a relatively expensive way. I think in general the sensitivity in the market of purchasers, let's say, of utility paper etc. has changed the project.

It gets more and more common knowledge, it gets more and more common that people would invest in bonds which are placed visibly in the capital markets.

The insurance market conditions: I think I'm going to skip this thing because there are other people probably more qualified to speak about that.

Deductibles are increasing well we have to revisit, we have to structure it into the project because it's an additional cost, it's an additional risk.

New technology: I want to make a comment on, let's say, the gas fire power plants side.

Producers of gas turbines, who built turbines much much earlier, don't have the operating hours which they used to have and that creates a problem for us and for you.

You don't want or the people who are in the insurance business don't really want to insure it.

I want to show an example. We have the Doswell plant which was the biggest underwriting we have ever done, it was successfully syndicated etc. One morning I get into the office and one of my people shows up and says: Doswell blew up the turbine! I did not hit the ceiling anymore, because we'd had situations like that before. But let's see it now: how does it really work with the insurance

package? How is this insurer going to pay etc.? And what's the process? Is it really the process which we thought about with a lot of "what if's in the negotiations of the documents? The damage was 43 million dollars and 108 million dollars in business interruption and, by the way, the insurance company performed very well in this process, but they brought up an additional comment or an additional problem.

The premiums increased from 1 million dollars up to 5.5 million dollars. I mentioned before, if we look at cash flows, the cash flows need to be predictable. The only thing or the few things in a project finance which is not predictable is actually the insurance premiums. All the other contracts are long-term contracts and you know exactly what's going to cause the price to increase or to decrease, if that should be the case.

The insurance is a 1-year package and then all the balls are up in the air again.

Those are further things which have happened to this industry: certain insurances have locally insured this equipment, deductibles have increased, it's very hard to get business interruption insurance etc.

There are some opportunities for insurance providers as well and you can read those things here.

Those are ideas which we brought up, ideas where there might be opportunities.

There's one opportunity I want to focus on a little bit, that's "gap insurance for E.C.A.s", for example, or political risk coverage in general.

I don't know if there's an appetite within the insurance industry to really provide that, but there could be something which could be probably very lucrative and if we did it without the E.C.A.s, it can be done much much quicker than to deal with government agencies for six months or a year until you finally have a coverage in place.

Insurance companies start to look as well at investing into projects, so some American companies are investing equity or subsidiaries of insurance companies are investing equity into projects, because they sometimes offer attractive returns.

Insurance companies place that, seal that into those projects for long-term financing purposes, because insurance companies like a fixed return over a lengthy period of time, those are attractive assets to really do that.