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**EMERGING MARKET INFRASTRUCTURE: WHERE IS THE MONEY TO  
COME FROM?  
Securing Global Growth**

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Emerging markets need large-scale investments in infrastructure to sustain economic growth, create and support jobs, and to attract investment. Emerging economies worldwide have accordingly set ambitious goals for further development of this infrastructure.

**Moderator:**

**Yermolai Solzhenitsyn**, Managing Partner, McKinsey & Company, Russia

**Panelists:**

**Sergei Emdin**, General Director, Northern Capital Gateway LLC

**Kairat Kelimbetov**, Minister of Economic Development and Trade of the Republic of Kazakhstan

**Balasubramanian Muthuraman**, President, CII; Vice Chairman, TATA STEEL

**Dominic Silva**, Investments Executive Director, Khazanah Nasional

**Lars H. Thunell**, Executive Vice-President, Chief Executive Officer, International Finance Corporation (IFC)

**Artem Volynets**, Chief Executive Officer, En+ Group

**Y. Solzhenitsyn:**

Good afternoon! Today's session is dedicated to infrastructure. Before I introduce the participants, I would like to say a few words about how the idea for this session of the Forum came about, the common theme of which is the future. Before the crisis in Russia, the construction of various infrastructure projects got off to quite a vigorous start. The crisis wiped them off the agenda, but now it is perfectly obvious to all, that this issue is returning to the epicentre of social and economic development. At the same time, people are saying that the budget is limited: there are many social obligations, and many other programmes have already been announced. It has already become almost common parlance, in many circles that deal with infrastructure issues: the Ministry of Finance always says there is no money. It's probably the same in many countries. That's why we decided to hold a session to discuss what lessons Russia can draw from the experience of other emerging markets, how to make up our infrastructure deficits in a sensible way, how to finance them wisely in order to raise the country's competitiveness, but without undermining it in future by investing a big pile of money ineffectively. First I will ask the participants to introduce themselves. Let's start here. Mr Kelimbetov.

**K. Kelimbetov:**

My name is Kairat Kelimbetov, and I am the Minister of Economic Development and Trade of the Republic of Kazakhstan.

**B. Muthuraman:**

My name is Muthuraman, I am President of the Confederation of Indian Industry in India and also the Vice-Chairman of Tata Steel.

**S. Emdin:**

My name is Sergei Emdin, and I am the CEO of Northern Capital Gateway, the concessionaire of the St. Petersburg Airport.

**A. Volynets:**

Artyom Volynets, CEO of the En+ Group.

**L. Thunell:**

I am Lars Thunell, CEO of the IFC, which is the private-sector arm of the World Bank.

**Y. Solzhenitsyn:**

Thank you. I would like to start with the experience of other countries, perhaps in the same order that you just introduced yourselves. Mr Kelimbetov, a question for you: infrastructure is the joint legacy of Kazakhstan and Russia; what basic challenges does Kazakhstan see in the reconstruction and modernization of that infrastructure, and what successful solutions have been found for this task?

**K. Kelimbetov:**

Thank you very much for this opportunity. I will explain first how infrastructure projects are financed. As you know, in Kazakhstan, there are two sovereign funds in addition to budget financing. The first is the National Fund. That consists of all the proceeds from the oil sector. They do not contribute to the budget, but go directly to the National Fund. This is an account that is held by the Ministry of Finance and managed by the National Bank of the Republic of Kazakhstan. The second sovereign fund is the Samruk-Kazyna Fund, which manages all state-owned industrial infrastructure companies. You know that the Samruk-Kazyna Fund includes the national oil company, the railway company, telecommunications, aviation, and so on. With regard to infrastructure, the budget mainly finances roads, through direct funding or by borrowing. Such

institutions as the World Bank, the European Bank and the Asian Development Bank play a big role here. These are preferential loans, which are provided under state guarantees.

The biggest project that I can name is the Western Europe-Western China international transport corridor, which crosses the territory of Kazakhstan. It is almost 3,000 kilometres long. The World Bank provided the loan. On the other hand, before the crisis—probably not because of mistakes, but rather over-expectations regarding public-private partnerships—we passed the relevant legislation, created a special centre in our ministry, but overall, it would be an exaggeration to say that the projects really got going. There are two issues here: the institutional capacity of the state to calculate the costs of such projects, which would then be paid off by the associated revenue flows. The second issue is to decide that if these projects do not pay for themselves, then part of the cost is to be subsidized. We certainly understand that financing with a PPP is more understandable, transparent and predictable than financing from the budget, which, unfortunately, may be delayed, meaning that the quality of financing of infrastructure projects suffers. From time to time the Samruk-Kazyna sovereign fund receives transfers from the National Fund, and, in turn, it finances projects of state-owned companies, such as the Kazakhstan railway or Kazakhstan electric power companies.

What problems arise from this? The companies are overloaded with debts. That can continue for a while, but when a company is overloaded with debt, you have to find a new approach. Very soon we plan to attract equity investors, that is, to hold an IPO, in order to relieve the debt burden. One interesting thing that we used during the crisis, and which should be used in future, is our relationship with Chinese financial institutions. I think that the loan proportions have changed dramatically. Before the crisis, the total debt to Chinese companies was USD 100 million. When capital markets were closed to Kazakhstan's banks, we replaced

them with access to cheap and long-term Chinese funds, which actually financed projects totalling USD 13 billion. That is a very large figure.

Why do I mention this? We also approached Vnesheconombank, to diversify the geography of our loans, but, unfortunately, except for financing the modernization of the Ekibastuz GRES-2 power station—which, incidentally, has still not begun—we were unable to reach an understanding. Although I believe that under the Customs Union, for example, joint financing by our development agencies, development banks and the Eurasian Development Bank, could stimulate support for domestic producers in both Russia and Kazakhstan. I think we should return to this point separately.

**Y. Solzhenitsyn:**

Can I ask another question? You said that the PPP is probably the most effective form. Could you give us an example of a PPP in Kazakhstan?

**K. Kelimbetov:**

Yes, we built a power line, which linked the north of Kazakhstan with the west. First of all, the project was completed on time, which in our countries is probably quite an achievement. Secondly, we understand the financing flows, and we are pleased that not just the state, but also a private company, is responsible for the project.

**Y. Solzhenitsyn:**

A local Kazakhstan company?

**K. Kelimbetov:**

Yes, a local company.

**Y. Solzhenitsyn:**

But are there examples of foreign investment in infrastructure in Kazakhstan? You said that China is providing credit. Is there an example where foreigners are doing the building, or are concessionaires?

**K. Kelimbetov:**

There are projects in which, for example, the EBRD is a shareholder. For instance, the municipal power company. In such places, where there are financial flows, the EBRD is a leader and in principle has a commitment to a billion dollars of investment in such projects. There is one problem. I think it is common to both Russia and Kazakhstan: how to use long-term money from pension funds. We started one project, with a public-private partnership. Unfortunately, due to miscalculations the project has now ended up being subsidized by one of the national companies. It seems to me that long-term funds, which could be put to work on infrastructure projects, have not been fully utilized, and I think this is a potential that we can develop together.

**Y. Solzhenitsyn:**

Good, you gave examples from our common reality. I would like to ask Sergei a question. Sergei, you also have, if I understand correctly, a PPP—the Pulkovo project. Tell us how it evolved, how you gained access to credit, how our situation is similar to that of Kazakhstan and how it is different.

**S. Emdin:**

The history of our project is, I think, quite typical of PPPs at airports. Several years ago, the city of St. Petersburg, which was the sole owner of the airport, came up against the need to develop it further, and decided to use the PPP format. A preliminary plan was drawn up, with a preliminary cost estimate of around EUR 1 billion, and an international tender was held. Our company won the tender. One of the key requirements, besides bringing in money, of course,

was that each consortium had to have a core player; that is, aside from money for the airport, you had to have know-how from one of the world's leading players. Our project has been on-going for about a year now. Overall, I can say that it is developing successfully, although there are a number of problems which, I think, could be useful to share at this round table. In my view, if these problems are not solved, such projects will not be repeated in large numbers. There will be one pilot project, a second pilot project, but still with many elements of manual control. However, the challenge is probably to have many of these projects, and for them to expand into all the regions. Unfortunately, the legislation and the PPP model in its present form do not allow these processes to be fruitful and multiply.

**Y. Solzhenitsyn:**

What are the main barriers? They cannot multiply, but is something taking shape?

**S. Emdin:**

One of the problems we face is the stance taken by the state. Unfortunately, the state says one thing, but after the contract is signed, we get hit with big surprises. Another department comes along and says: "We've been thinking that you probably should not get this license, because we don't know who your shareholders are." Some time later, along comes the anti-monopoly department and says: "During the bidding, of course, you were promised certain preferential treatment, but now we've decided that this goes against the spirit of anti-monopoly law, and so we are most likely against it." Naturally, such surprises are very unpleasant for the investor. Unfortunately, they emerge after the deal is closed. This is disappointing.

**Y. Solzhenitsyn:**

So what do we need? Some kind of supra-departmental agency or coordination centre? Let's brainstorm the question.

**S. Emdin:**

Quite honestly, I am afraid of creating new agencies. We have a great deal of them as it is, unfortunately, and it is very time-consuming to deal with all of them. All the same, someone should probably take responsibility for coordination. In St. Petersburg there is an agency that coordinates decisions about all matters at the city level. Unfortunately, many questions involving the airport go beyond that jurisdiction and are addressed at the federal level. But at the federal level, unfortunately, nobody is regulating this, and each department has a life of its own. Regulation is a separate issue; maybe we should discuss it separately.

**Y. Solzhenitsyn:**

Later. We have an entire slot devoted to regulation.

**S. Emdin:**

It is an enormous problem. The regulation agency has a life of its own and does not take into account the problems that we are facing with PPP projects.

**Y. Solzhenitsyn:**

OK, I see. Lars, I wanted to ask you: From the experiences of different emerging markets, what has the IFC seen, maybe even done and taken upon itself, to let us say, attract the proper balance of state, or organize the proper balance of state, but also other sources of financing?

And in general, these points Sergei referred to, how have you seen different countries or entities coordinate among the many different participants who may have different priorities, both from the government's side and the investors' side?

**L. Thunell:**

First of all, we are very, very active in the whole question of infrastructure. Last year, we did about USD 3.5 billion in investments and you can probably multiply it by five to get the total project value. So it was significant. And what we see is we work a lot with PPPs, because we are private-sector.

And when you look at what is necessary, I think first of all we have to look at the project cycle first. Very often we find that projects are—there are a lot of ideas about projects but very few of them are bankable. So we need to go through that, with feasibility studies and other things, and very often people forget that section because it is like venture capitalism—it is very early, very high-risk, takes a long time.

The second part is the construction phase, where you have the risks relating to that. And then you come to the longer-term financing.

When the project is up and running, then it is fairly easy to finance. There is a lot of liquidity around the world and so on. So it is really those first two of the five phases that are critical.

And then the long term. You may have to bring in foreign funds because the local market does not work, but it is kind of there.

What we find is that what is really needed is the government's engagement. Governments will understand that if they can still increase the stock of infrastructure by 1% that, actually according to research, generates about 1% more growth in the country. So if you can get that commitment, that is the critical thing.

But then a lot of it is capacity building. When it comes to PPPs, everybody, the business people think they can kind of shift all the risk off to the government and get all the profits. The politicians think that they can decide everything and just have somebody else finance it and take all the risk. So there is a lot of capacity building needed.

And there we see, as was discussed here, if you can find one unit that actually can focus and get the government and the different ministries to work together and build the capacity, whether it is a separate agency, or whether it is within the finance ministry, we will see different solutions.

But I think that, to me, is one of the keys, if you are actually going to see not only one project, but many projects. I understand here in Russia, for example, if you are going to build a port, you need 890 signatories or something like that. You know, you need somebody to help you with that if you are going to be a businessperson coming in.

**Y. Solzhenitsyn:**

What is a country that you would give as a good example of good practice in the emerging world? I mean, who really has learned to do these things very well?

**L. Thunell:**

Well, there are a number, a lot of people are trying, but I would say, we can come back to India, which is trying. It still has a lot of this bureaucracy and I am sure our representative from Tata will talk about it. I think there are some interesting examples. We just did a couple of transactions in Senegal.

**Y. Solzhenitsyn:**

Senegal?

**L. Thunell:**

Senegal, for example. They have tried the toll road that we built there. So there are a number of countries. And then you have got the middle-income countries like Mexico, which is moving in this direction, of course.

**Y. Solzhenitsyn:**

And in terms of Russia, what are the activities or plans the IFC is currently pursuing in the infrastructure space?

**L. Thunell:**

We are very, very proud to be able to be a part of the airport financing here in St. Petersburg. And we hope that that can be a demonstration case. Because that is also very important, that you show that it actually works.

So people can look at it. And I think here now, we have a demonstration case. So hopefully, the other regions and other parts of the country will pick that up and say, "Hey, let's go."

**Y. Solzhenitsyn:**

I guess we are a bit concerned maybe that the representative, the demonstration case is hard to replicate for now.

But let me ask a question. You mentioned India. Mr Muthuraman, I guess from the point of view of Tata or industry, maybe you see the question of infrastructure not just as somebody who is building some of these objects, but also using them. Can you describe broadly the Indian experience? And I am sure that India has built more infrastructure, you know, in the last five years than we will in twenty. What are the big takeaways you have learned? And specifically, how is coordination and replication, moving of the solutions across the country working?

**B. Muthuraman:**

Yes, thanks. You know in India, to give you a little bit of history, until the year 1990, Indian infrastructure was, to put it mildly, quite terrible. And in those years, till 1990, the government played three roles, or all the three roles. It was the policymaker, it was the regulator, it was also the implementer and the service provider. So when you have all roles rolled into the government, I think there will be problems.

But things have changed in India, especially in the last ten years. Between the years 2000 and 2005, in those five years, the amount of money spent by the government of India on infrastructure creation was something like 4% of the GDP, or 4.5% of the GDP.

In the next five years, between 2005 and 2011, 2006 to 2011, I would say it has been consistently increasing. And this year we are going to spend 9% to 10% of the GDP on infrastructure.

So that is one major—in fact, in the last five years, we have spent something like USD 500 billion on infrastructure totally. Out of which, and the important point is, that increasingly, not only the government is spending, but even more importantly, the private companies are spending.

In fact, ten years ago in 2000, the private-sector involvement in the infrastructure creation of India was at most negligible. Today it is about 30%. And there are sectors like telecom, ports, and airports where the new infrastructure has been created in the last five years. The proportion of private-sector participation is, at most, 70%. In telecom it is even more than 70%. In ports, it is around 70%. In airports, it is close to 60%–70%.

So private-sector involvement, the PPP partnership, has been actually one of the big success stories of India's infrastructure creation. That is the point that I want to make.

And of course, the Indian infrastructure surely is not complete. And let me tell you, for example in the next five years, between 2011 and 2016, India is planning to spend USD 1 trillion in infrastructure. That is the kind of infrastructure requirement that India needs.

In fact, India is growing in many ways. Between 2000 and 2011, it has clocked the GDP growth rate of over 8%, and often, 9%, 9.5%. And the one thing which we are worried about is that the growth could get stalled because of lack of infrastructure. In spite of spending huge amounts of money, we are still lacking in infrastructure.

But the success story is that the PPP partnership has been growing. We have learned a lot of things from the time we started the PPP partnership. There is a better understanding of the role of the government, the role of the financial institution, and the role of the private sector in infrastructure creation. And things are getting definitely better. And I say that in the next five years, we are going to spend nearly a trillion dollars on infrastructure.

**Y. Solzhenitsyn:**

So let me ask you. You say, it used to be very much government-driven and you were able to open it up to private capital. Here in Russia right now, we are still at the government-driven stage. We have some cases, but people are talking about barriers. What would be your advice to the Russian policymakers, to investors? What are the things they need to push for to make it possible for private capital to come to this place?

**B. Muthuraman:**

You see, infrastructure projects have two or three key components, which you need to handle. One is, it is inherently risky. And you cannot leave the entire risk to the private companies. That will not work. The government needs to step in and take part of that risk, and find a solution to take part of that risk. That is number one.

Secondly, the infrastructure investments are going to be long-gestation projects. You are not going to see profits, you know, for maybe seven, eight, ten years. So it is important for the government to save. Whether it is a question of land, or whether it is a question of water, whether it is a question of anything else. There needs to be a sensible policy of allocating and pricing of these restricted resources. That is the second thing which is important.

For example in India, I will not say we have solved all problems. But I think we have come a long way in this PPP partnership and in understanding what those roles are.

But I think, in India we do not have a deep enough, or broad enough, debt market, even today. We want to create that. And I think the government is seriously thinking of creating that and I see that happening in the next three or four years.

**Y. Solzhenitsyn:**

Thank you. Artem, now a question to you. A couple of months ago there was a discussion in Krasnoyarsk, focusing on projects regarding the construction of infrastructural facilities to export energy resources to China. It would seem that we're doing the right things, they need energy, we have surplus energy resources in the region. In terms of a classic infrastructural solution, what is the progress in that project, and what issues have arisen with financing, regulation, anything else?

**A. Volynets:**

Like President Medvedev, probably, we believe in private initiative. To quote Gary Oldman in the famous film *The Fifth Element*: "If you want something done, you've got to do it yourself." This does not mean that we should take everything and build everything ourselves. It means organizing the environment and the state entities on both sides of the border, so that they are coordinated with us. If we do not do it, it will never happen. We cannot sit around and wait for someone to build us a power line, and then begin to sell our wonderful energy to the Chinese. We have a real-life example: at our company, Rusal, we are finishing construction of the Boguchanskaya hydroelectric station and are in the process of building the Boguchanskaya aluminium smelter. The three-gigawatt Boguchanskaya hydroelectric station is a classic infrastructure project, and the

aluminium plant next to it is a project of a private investor, which is financed by a private company, Rusal, and a state-owned company, RusHydro. The reservoir and the network are being built by the state. Vnesheconombank issued the credit for the Boguchanskaya aluminium smelter. If we had not actively promoted this project, it would have failed long ago, especially under the conditions of crisis. However, even in the difficult years of 2009-2010, Rusal continued to invest in this project. We had an agreement with all of the 75 banks that had lent money to Rusal, that despite the complicated restructuring of Rusal's debt, this was the only project in which we would continue to invest. The project is nearing completion.

If we look at the possibility of exporting of electricity from Russia to China, we have a good example of a public-private partnership. Today at the Forum, our other company, RosSibEnergo, signed another agreement with Yangtze Power (a Chinese state-owned company, which owns the world's largest power station, the Three Gorges) for the construction of two hydroelectric power stations in Siberia and one natural gas-fired power station. These will be built half-and-half by us and our Chinese friends, with the goal of exporting electricity to China. Yesterday I signed a framework agreement with the Chinese Eximbank for project financing of up to USD 5 billion, which will go primarily to these stations. Do we have a power line between Russia and China that can carry this energy from point A in Russia to point B in China? Not yet, but we believe that through our private initiative, this line will be built, because there is fundamentally no other way to develop resource-rich Siberia and resource-hungry China. Eastern Siberia, sooner or later, will become somewhat like Quebec, where Quebec Hydro sells peak load to China. We are going to do the same thing in 10 years, when this line is built. That will not happen right away, so we as a private business must keep sight of the long-term perspective. We believe this will happen and we are already beginning to build the generating capacity.

**Y. Solzhenitsyn:**

Who is helping you? Are the state agencies or the regional authorities helping?

**A. Volynets:**

You know, this is a matter of making waves and creating an understanding at all levels that it is the right strategy, both at the level of private business, and at the level of regional and state authorities. You could say that we are working upwards from grass-roots. Now there is understanding at the regional level, for instance in Irkutsk, which now has a chance to become a promising Asian hub. It takes 2.5 hours to fly from Beijing to Irkutsk. Why then, for example, to get to Irkutsk from Tokyo, do you need to fly via Moscow? Airports also have to be built, like the one Sergei is building in this wonderful city. The local government understands that, thanks to our initiative, Irkutsk could become the largest regional hub. They are very interested in this, because it means additional tax revenue, industry, jobs and investment not only in infrastructure, but also in people.

**Y. Solzhenitsyn:**

So the barrier to further development is not so much the money as, say, the organization and interaction of the participants?

**A. Volynets:**

There is a good Chinese proverb: If you want to ensure well-being for one year, invest in seeds; if you want to ensure well-being for 10 years, invest in a forest; if you want to ensure well-being for 100 years, invest in people. I think the barrier is within us. We just need to think in a more far-sighted way than classical capitalism is accustomed to.

**Y. Solzhenitsyn:**

We in Russia often hear the argument that we would build something, but everything would just be stolen, so let's not build it and not waste money, it will all be so expensive. The cost of infrastructure construction, of course, is a very important question. Today, we spend or they steal, but tomorrow this money that was spent will return as a tariff. It has to go somewhere. We in Russia, unfortunately, are not building anything—it's all too expensive. There are many explanations, discussions, about why it is more expensive, how expensive it is. I think everybody understands very well that, unfortunately, the reason is lack of practice or lack of experience; but it is considered to be impossible to build more cheaply, in a new way. We conducted a study a couple of years ago: our electrical power is four times as expensive as in China, even more expensive than in Europe, certainly more expensive than in India.

**Y. Solzhenitsyn:**

Mr Muthuraman, first question to you. I will ask others. How did India learn to build cheaply? But apparently effectively. Because whenever we build something it becomes gold-plated. We are almost scared to build it that way, because it will lower the competitive nature of our economy using those gold-plated assets. I will ask several people the same question, but start with India?

**B. Muthuraman:**

Yeah. I should just speak in English because the translation is not working.

**Y. Solzhenitsyn:**

That is another thing we have to fix in our country.

**B. Muthuraman:**

India has managed to do some innovation. I would call it the bottom of the pyramid: something quite inexpensive and not gold-plated. For example, I will

give you an example of the Nano car, which is made in India just about a year ago. We just got all the features, which satisfies the Euro norms for emissions, which is very safe. This costs USD 2,500 per car. We have several of those, one of our companies in India has for a long time—for the limbs, you have got artificial limbs and there is a location in India which is famous for transplanting limbs at a fraction of the cost that it costs elsewhere in the Western world. Similarly, I can cite that there is some medical equipment that our people have invented which is some one tenth of the cost of the Western world.

So I believe that when you have a necessity, when you do not have too much money, when you are not extremely well off, you find ways to work on those difficulties. I think that is what had happened in India, I believe is that.

Many of our projects I have seen, if you want to build a steel project I find it is 60% of the cost of the project that is built anywhere, which is the same for steel and the same for cars. It is the same for ports.

Of course, if you come to India and make a mobile phone call, it is probably one tenth or one twentieth of the cost that you will find anywhere else in the world. Of course, I am not advocating that, because our telecom companies are not doing very well in India.

They are a little bit bleeding and maybe we need to do that adjustment a little bit. But Indians over the years I think have found a way of doing things less costly, but without sacrificing the fundamental requirements of that product or that service.

How does it happen? I would actually say, it is people, it may look a little bit arrogant but I do not want to sound arrogant, but I think Indians are basically very inventive people, and I want to repeat that here.

### **Y. Solzhenitsyn:**

Sometimes why it is expensive in Russia is also because Russians are very inventive.

**Y. Solzhenitsyn:**

I have a question: how does Kazakhstan fare in this respect? What about the problem of expensive construction, or the optimization of costs?

**K. Kelimbetov:**

Our situation is probably similar.

**Y. Solzhenitsyn:**

To India's, or to ours?

**K. Kelimbetov:**

To yours. Probably because we have the same mentality. The previous speaker said that the main thing is the mentality and the people. Unfortunately, the mentality of builders of all kinds is not to finish the job on time, which in itself leads to increased project costs. The second problem is that people want to receive unearned income from that increased cost; they see the possibility of so-called earnings from the procedure itself. They do not see an opportunity to earn money from completing the project on time according to the contract. But I do not think this is peculiar to the former Soviet Union. If we look at how infrastructure projects are carried out, we see that even in the United States, where they are financed from the budget, the same thing happens. Projects drag out for years and as a result become much more expensive. I think there is only one solution: the mentality of the people has to change, while the institutional capacity of the state and the quality of expert review have to be raised. No other way out is conceivable.

**Y. Solzhenitsyn:**

True enough. Artyom?

**A. Volynets:**

I just wanted to give an opposite example. The last aluminium smelter built by Rusal, the Khakassia smelter, cost USD 2,500 per ton. The last aluminium smelter built in the world after that, in Abu Dhabi, cost USD 12,000 per ton. The Qatalum plant in Qatar cost from 6,000 to 8,000, depending on whether you count the cost of the energy infrastructure. There are examples that show that it is possible to build more cheaply in Russia, if the building is carried out by a private business oriented towards profits and a rapid return on capital.

**Y. Solzhenitsyn:**

That is, cheaper by half? That is impressive.

Lars, a question to you. We were just discussing, I do not know if all of it was in the translation. But, in Russia, we often are scared, where people use this as an excuse to delay funding of large capital investment, large infrastructure projects because they will be costly, they will not be done efficiently, and this will, let us say, burden the economy going forward. People are afraid that half the money will get stolen.

And then, we have talked that in India, they actually managed to do it quite cheaply. Artem just mentioned that actually when private capital is interested about its own money, we could even build significantly cheaper, maybe, than others.

What is your experience in different countries? What is the smartest way for the government to ensure that what is built is built in the most efficient way?

**L. Thunell:**

Well, I think, from our experience PPP, Public–Private Partnerships, are the best way because then you have got the economic interest of making them as well as possible. Part of that is actually structuring the process so that it is an open

transparent process with a good concession. We actually, besides financing, running such processes as well.

But, I would also point out, the way we look at this, everything does not have to be big projects. I think if you look at what was in Albania, recently, they are now focusing on mini-hydropower stations. You can actually do them in a series instead of doing one big project. So, I think, we should not only focus on the big stuff.

The other thing I would say is when it comes to cost, is that sometimes we focus on just the upfront cost, but we should really look at the lifecycle cost, including maintenance and efficiency.

If you look at Russia, we all know that the big opportunity here is really in energy efficiency, for example—efficiency of resources. So that is how you encourage that as a government. It is another thing that one should look at.

**Y. Solzhenitsyn:**

Sergei, you were talking about regulation issues. This is probably the last major slot in our panel, after this we will move on to a free discussion. People will be able to ask questions of the participants and of each other.

Regulation. I know from my own experience that in some natural monopolies, there is a discussion every year about what the tariff is going to be. No one really has a clear idea of what will happen in five years—neither the leaders of the state nor those who work in the industry. What regulatory issues, particularly tariff regulation, arose in your project? How do you think they should be resolved, so that the picture would be clearer?

**S. Emdin:**

I will probably not be wrong if I say that tariff regulation is one of the key risks of our project. The question is what the tariffs will be at the airport throughout the 30-year concession. Today we can say that the system of tariff regulation is

based on an annual planning cycle. You work for a year, make a profit or a loss, you take these figures to the tariff authority, and they either tell you to close up the gap or they say “Beg your pardon, everything's fine, come back next time.” This methodology is clearly inappropriate for PPPs and infrastructure projects, because investors and banks have to plan and know what the revenues will be throughout the concession period. Clearly it is impossible to obtain precise figures, but there has to be a projection and a precise understanding of the state guarantees.

The second question that also must be addressed is legislative regulation of investments. Today reasonable investments have to be included in the tariff and declared; but as soon as the regulator sees, for example, that the amount required is substantial, and that it actually distorts the tariff, then the regulator falls into a stupor and does not know what to do. On the one hand, he has to do something, but on the other, he realizes that there are political decisions made higher up, that the tariffs have to go within a specific line of the budget, meet expectations for inflation, etc. Dialogue goes nowhere, because the tariff regulator simply does not know what to do.

**Y. Solzhenitsyn:**

May I ask you a question right away, and maybe also Artyom? All this, of course, has occurred in the energy branch. There was the famous ‘Chubais’ Cross’. They said that we have a shortfall, we need electric power, there is no money, where are we going to get it, let's attract foreign investors and their money and skills. Everybody came up with some hypothesis or other about the future tariff and how to deal with the issue of investment. What was done wrong, and was something done wrong on the Russian side, or was it simply that investors should be more careful? Artyom, you go first, and then Sergei as well, he used to be in the energy business.

**A. Volynets:**

Yermolai, remember, last year we went together, with the McKinsey company, to a seminar in Beijing on the Russian energy sector? We told the potential Chinese investors and partners how attractive the Russian energy industry is, why it is attractive, that there will be free-market prices, and that the most competitive companies, such as EuroSibEnergo, will earn big money, because they will continually increase their revenues. But, we now find ourselves not quite where we had planned to be a year ago. One could explain this by the pre-election activities this year, and hope that next year we will come back to a freer market. That would of course be more interesting for the EuroSibEnergo company, as a very effective generator.

I think that many foreign investors in Russia's energy sector have been confused over the last several months. I hope these are transitional difficulties, and that elements of the energy market such as long-term contracts between major producers and major consumers will help us get out of this state of uncertainty.

**Y. Solzhenitsyn:**

Sergei, you worked in this industry for many years.

**S. Emdin:**

I agree with Artyom: the main problem is that the rules were changed in the middle of the game. Promises were made, investors entered the industry, but then the state became terrified for various reasons, and not all of those reasons were objective. A mechanism for manual price adjustment was put in place on the 'free' market, and regulation was frequently subject to macroeconomic parameters, but not the microeconomic rules by which companies should regulate themselves.

**Y. Solzhenitsyn:**

What was lost in the process? Was it that previously people simply did not take into account how much it would cost to build something, and then along came the tariff change? Is it really true that they did not think about it, and then were surprised to find out how expensive it would be?

**S. Emdin:**

I think there were mistakes and miscalculations, but the main thing was political pressure. When deciding to liberalize one industry or another, we have to think about how that liberalization will affect other industries. I think the key factor is that many ineffective or semi-effective industries started to go under when the energy sector was liberalized, and so the government said, "Let's back up a little."

**Y. Solzhenitsyn:**

Lars, I know you will have to leave soon, so I will ask you a question to make sure we get the answer before you have to go. The problem is, as we are discussing, that Russia does not have long-term tariff pricing, planning in the regulatory sphere. In some areas it is just an annual cycle, for airports I could say or railroads it is the same. In other situations, there were, some would say, some expectations which later did not come to be realized, for example, covering investments in the tariff.

What again, maybe would you name as a best-practice example in the emerging markets, where governments have gotten it right, where they have actually been able to set up a bit of an outlook and a set of rules and guidelines on tariff regulation, so that investors into a natural monopoly or investors into a sector with regulation, actually can plan ahead a little bit. How have others solved that problem of looking ahead?

**L. Thunell:**

I am not sure I can come up with one that has done it perfectly. We have to look at each type of infrastructure. But we have done some, I think, very good projects when it comes to airports in Tunisia and in Jordan for example, that have been very good.

But I think this whole question is something that is very troublesome, because you very often have prior projects that are inefficient, if I take one in the energy sector, we are involved in Karachi Power and they have 40% losses of the electricity that goes out; half of it is stolen, half of it is technical, and to change that is—which was the agreement with the government—very hard because it is perceived as a right of the people to actually do this. Or if you have very low tariffs, you know, and subsidizing countries—and now as you have budget deficits, this is becoming a real issue. So how do you solve it, very often it is renegotiating your contracts. And if you take water, it is where people, even the UN has said this is a human right to have free water—how do you deal with it. The best one I have seen on water is South Africa, where it actually says that everybody should get X litres of water per day for free. But beyond that, when you fill your swimming pool, or use it in industrial processes, you have to pay real market rates. And if you have a market rate, I think you also, and that we also have seen in India and in some other places, you have merchant projects. It actually can be profitable, because they can see the demand and supply is going to be working. That is the best situation, as a matter of fact.

**Y. Solzhenitsyn:**

Mr Kelimbetov, you had something to add?

**K. Kelimbetov:**

Regarding so-called smart regulation, I agree with all the previous speakers. The fact is that the state's work with the natural monopolies and infrastructure companies is still structured in the old way. Every year the company comes to

the anti-monopoly authority and tries to inflate the tariff. It's like a game. The anti-monopoly authority says, no, it's impossible, it will be inflationary, we have such-and-such a rate, forget about it. In the end, they reach an agreement somewhere in between, shake hands and walk away contented. The bottom line is not, unfortunately, long-term modernization of assets. The assets are worn out; at least in Russia and Kazakhstan that is definitely the case. They are worn out and they have to be replaced.

What new approaches are we using in the case of energy? First of all, we created, as Yermolai said, a kind of supra-organization that oversees all infrastructure companies—the Samruk-Kazyna Fund. Working with the McKinsey company, we have begun to examine the companies' tariff policy, looking at what really makes sense, and what does not. First on the list is separate reporting in the railway company. We have separated freight from passenger services. Russia switched earlier to full, 100% subsidy of passenger transportation. We now have a gradual transition plan. Generally it is necessary to separate managerial and financial accounts—to separate what makes sense from what does not make sense—and where this is a function of the state, the state must finance it. How are we doing it now? For example, the state saddles any state-run infrastructure company with the responsibility, saying, “This is the tariff, now you deal with it.” But this is no way to really stimulate the effectiveness of state companies, and state companies have to be effective. What are we doing? We proposed that most companies hold a serious IPO, either in London or in the local market. That requires a long-term tariff. Policy can't change from one year to the next. A long-term tariff is optimal for the private sector.

**Y. Solzhenitsyn:**

Are there already examples of such a long-term tariff in Kazakhstan?

**K. Kelimbetov:**

Yes, there are. We changed the legislation for electrical power. We set a maximum tariff for all electricity producers. For each one individually, not a uniform tariff. Then we encountered an interesting problem: for companies that are already producing electricity, we address the issue of modernization of assets; but for companies that are new and want to build power stations, we had a big problem. We invited in Chinese and South Korean investors. Naturally, they came with a package of requirements. What did we encounter? A new tariff at any new power plant will be significantly higher; and then the big question is, what do we do, how do we approve it? The state could provide a subsidy, but the result is not a very pretty picture. So we studied the mechanism, and now new legislation is being introduced on so-called procurement. That is, we guarantee the purchase of all the electricity, and then we work out a plan, taking into account the fact that the state has other power-generating capacity, and we mix up all this electricity and come up with an average tariff. This is an innovative idea. We expect that the legislation will come into effect this year.

As for the tariff, first of all it is attractive to the private sector, or to those who will be involved; and secondly, it is acceptable to consumers. Here again the question arises: if it is unacceptable to the consumers, what do we do? Then there must be some kind of innovative mechanism, as I mentioned, or it must be the responsibility of the state; that is, the state must subsidize it. In any case, not having a long-term tariff policy for infrastructure companies is like burying one's head in the sand. But the problem doesn't go away, and it's still going to be more expensive. It is better to deal with it now and approve the rules of the game. By the way, it will not affect inflation very much, if we see specifically when, what, and how the tariff is rising.

**Y. Solzhenitsyn:**

So it is a formula for a few years to come. What kind of horizon would you in Kazakhstan be able to describe to investors, regarding the formula by which the

tariff would be changed: every two years, three years? In Russia it is still every year.

**K. Kelimbetov:**

Since we have the political task before us of bringing the company to an IPO, we are planning on five years and more. Otherwise there is no point.

**Y. Solzhenitsyn:**

That makes sense.

What is the Indian experience in expanding the planning horizon for those investors to whom the price of a regulated service is the key revenue driver? Be it an electricity tariff or railroad tariff, how has the country dealt with that problem?

**B. Muthuraman:**

Quite frankly, we have not dealt with it, I think, very well. And this issue actually is the central issue of getting infrastructure projects fast and quickly with correct prices and so on.

For example, the allocation and pricing of all these limited resources, as I said, is a central issue in infrastructure projects. And you have on the one hand revenue maximization, or short-term revenue maximization, as a goal of the government. On the other hand, you have long-term social benefits to the country and the people of the country, and the return on capital of the people who have put in capital. These are quite often competing factors and we have not found a good balance in that.

I recall a project in India some several years ago where Enron was involved—it was a power project in one of the large states of India. After the project got built, and it was sort of ready, the foreign company had to pull out of the whole thing, because the power tariff that was being promised was not long enough. The surety was uncertain and he was not sure whether he will get a return or not.

So it is actually a fundamental issue. The government of India very recently has founded the committee on what is called 'The Allocation and Pricing of National Resources'.

And we are actually struggling to find out what the correct balance in this is, because you can have a situation where the profits are too high and the prices are too high, or the government is not getting enough return or enough revenues. So, I also would like to see—you are the consultant and for that, I would like to ask the question to you, as to what good practice in the world is, so that I can take it back to India. I do not have an answer for that, quite frankly.

**Y. Solzhenitsyn:**

We will take it offline.

If there are questions from the audience, please address them to a specific participant. None yet. Any questions? Or is everything absolutely clear and it is already late? Then I will have... Can we have the microphone over here please?

**I. Kuzin:**

Thank you. Igor Kuzin, Ministry of Finance. I do not have a question, but a comment on changing the rules of the game to attract investors to the energy markets. What always happens with us is that if we let the market float freely, singling out some portion for deregulated tariffs, then for some reason the tariff begins to rise immediately, to a level that the economy is simply unable to sustain. This is the great riddle of Russian business. No matter what we do, when we do not allow companies to raise their tariffs, they say, "If you are going to regulate the tariffs, then subsidize the other part of our business." But this subsidy too comes out of the federal budget. Usually that means the taxpayers' money. If we do not regulate tariffs and let them float freely, it still falls on the taxpayers, because ultimately the consumer pays for all of it. Maybe it makes

sense to grant a subsidy and transform it via the price of the goods, via the consumer, who produces the product.

A very good example was just given of the effective use of private funds for construction of an aluminium smelter. However, here such examples unfortunately only occur in private business. When we look at state investments, despite the notorious 94th federal law that reimburses money in lowest-price tenders, it still gets more expensive during construction. Question: how should we proceed today? Increase the state's share in investment, or decrease it to optimize the value of investments in the country? I would like the participants to illuminate this issue, if possible.

**Y. Solzhenitsyn:**

Would anyone like to answer?

**K. Kelimbetov:**

Today President Medvedev talked about the increasing role of the state. The state can be involved to a level with which it is comfortable. In some countries, the state plays an obstructive or some other kind of role. It is a truism to say that the private sector does a better job. I think now, after the crisis, a great temptation has arisen to assume that the state can do better in the market economy than the market players. I think we should drop that idea as fast as possible. Of course, there are market failures, as you correctly pointed out. Here, the regulatory role of the state should not become stronger, but more adept. I think it is better to share the risks with the private sector or to shift them there altogether.

**Y. Solzhenitsyn:**

In Russia we still can't even build a road from Moscow to St. Petersburg. It all adds up. Concessions are probably the way to go. Any comments, questions? If

not, I suggest that to conclude our discussion today—we only have 5-10 minutes left—I will ask each participant, if they are representatives of Russia, to say what they would like to see from the government or the regulatory agencies. If the person is not a representative from Russia, what general advice would he give Russia on our common major task. We have been talking for a long time about the depreciation of all assets. The next decade is already certain to become a decade of big construction projects, as you said. What advice would you give Russia and the Russian government, so that this construction will proceed in the best way? Let's start with you, Mr Kelimbetov.

**K. Kelimbetov:**

I like the paraphrase of the famous proverb about roads, bad infrastructure and bad management. The management needs to be fixed, and I think both the existing state regulators and the municipal authorities can do it. So, first of all, we need good management practices. May I add one thing?

**Y. Solzhenitsyn:**

Yes.

**K. Kelimbetov:**

We already touched upon this issue. It seems to me that today we have been talking rather narrowly about domestic infrastructure, and only in passing mentioned the possibility of energy bridges. At many other sessions they are saying that there is a new geopolitical reality—the growing role of China and the Asian markets, and, shall we say, their greater connection with the European Union. The establishment of the Customs Union of Russia, Kazakhstan and Belarus provides a very good opportunity to play the role of an infrastructural and logistical bridge between these two major global players. I mean global projects for modernization of railways, or, in some segments, high-speed railways or

motorways. It seems to me that funding for this should not be limited to the capacities of Russia, Kazakhstan and Belarus, but should also be global in nature, like the tunnel between London and Paris. There must be new funding mechanisms, so that we attract not only ourselves, but also global investors.

**Y. Solzhenitsyn:**

Any final, let us say, advice to Russia, as we enter the big build for the next ten years?

**B. Muthuraman:**

Yes, my advice I think is quite simple.

One is encourage private investment in a very big way. I am not saying anything new: this has been said this morning by your President. But it is not as easy as the statement.

There is the other side, which is the government. Government must ensure that the private entrepreneurs can see a stable future, which is very important. Create an atmosphere of confidence, whether the investment can take place with the belief, with the confidence that investment will give returns, in terms of investments. That is fundamentally extremely important.

The third is: a regulator is important. The government must regulate. A regulator has two roles: the regulator must ensure that the private investment yields returns, positive returns, adequate returns to cover the cost of capital plus something more. It is important. Secondly, the regulator also must ensure that there are no super-normal profits, by ensuring that there is enough transparency in the laws and systems and so on.

I know, this is a very simple recipe but actually, I believe that success relies on simple recipes, as far as we are able to get it done.

**S. Emdin:**

I would like to say three things. First, I think the state should define the priorities in each specific case and in each specific industry: what it wants from each specific situation, whether low tariffs, new capacities, access to foreign markets, convenience for consumers or something else. Very often there is no clear understanding of what the state wants, so investors get very different signals. Second: imagine yourself in the investor's shoes. The investor is not asking for anything out of the ordinary. This is a general economic truth: If the regulator puts himself in the investor's shoes, he will quickly understand why the request is being made. Third: there are pioneering projects in various areas. They are finding things out the hard way, and one can learn from them.

**A. Volynets:**

I am afraid I will not say anything new. The participants have already formulated common views. The only thing I want to add is that, from our point of view, Russia now has an absolutely unique opportunity that has never existed before. This is an opportunity to develop large-scale construction, which will be mainly in Eastern Siberia and the Far East. Western infrastructure already exists, but in Siberia we have almost nothing except pipes and railway lines that run from east to west, but not from north to south, as they should now. Today Russia has a unique opportunity to develop this infrastructure through cooperation with the Asian-Pacific region, primarily China. Instead of travelling to Moscow to ask for money for a kindergarten or a railway, we have a real opportunity to organize Chinese, Japanese or Korean private and state capital; they would be glad to consider infrastructure projects. All that needs to be done, as Sergei said, is to establish the rules of the game for such capital and not to change those rules during the process.

**Y. Solzhenitsyn:**

By the way, at the Krasnoyarsk Forum, which we mentioned, there was a session on investments in Asia and Siberia and the possibilities of doing trade there. Trade is, after all, completely undeveloped there. Reciprocal investments are on a very low level. We generally do not invest there, so we have a very Eurocentric economy. Participants also complained about the poor quality of the preparation of potential projects. There is also a vague fear that because Asian countries are now investing in our country, we are going to fall into some kind of infrastructural slavery. I want to thank all the participants in the discussion. We are finishing right on time, which is good for any infrastructure project. Thank you all and enjoy the Forum!