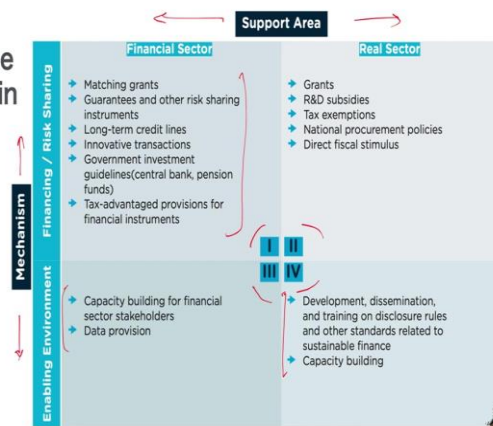


UN SDGs: 17 Goals to Transform Our World
Professor Doctor Shivaji
Design for Sustainability Lab, Department of Design
Indian Institute of Technology, Hyderabad
Module 28
Financing the SDGs and Global Funds,
Implementation Planning,
Capacity Building and Finance Part 4

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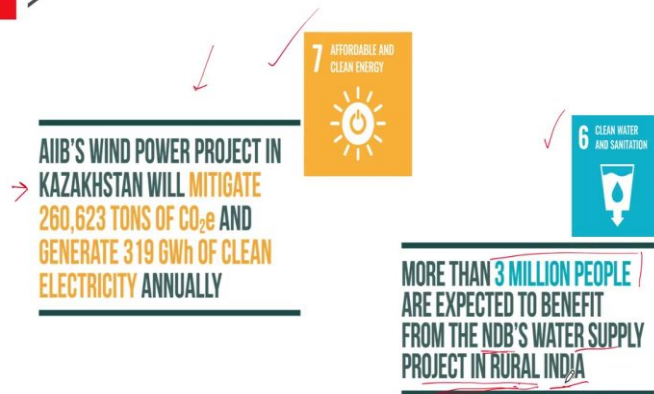
Typology of public finance intervention in support of sustainable finance



Source: UN Environment/WBG Roadmap Team.



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THE MDBs ARE INVESTING IN FRAMEWORKS AND STANDARDS TO ASSESS THE QUALITY OF INFRASTRUCTURE INVESTMENTS



THE CEB'S FINANCING HELPED CREATE 6,000 PLACES IN FRANCE TO ACCOMMODATE ASYLUM SEEKERS AND OTHER VULNERABLE PEOPLE



IN JORDAN, IFC'S SUPPORT TO THE GARMENT SECTOR WILL HELP INCREASE EXPORTS BY \$100 MILLION ANNUALLY BY 2021

THE EBRD SUPPORTED UKRAINE'S DEVELOPMENT OF AN E-PROCUREMENT SYSTEM, SAVING THE GOVERNMENT ABOUT €1.1 BILLION



THE WORLD BANK'S \$1 BILLION SUPPORT FOR ACCELERATING INDIA'S COVID-19 SOCIAL PROTECTION RESPONSE WILL SCALE UP CASH TRANSFERS AND FOOD BENEFITS AND DEVELOP MORE INTEGRATED SOCIAL PROTECTION SYSTEMS



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THE IDB GROUP'S NATURAL CAPITAL LAB AIMS TO DRIVE INNOVATION IN THE SUSTAINABLE USE AND CONSERVATION OF LANDSCAPE AND MARINE ECOSYSTEMS





15 LIFE ON LAND

14 LIFE BELOW WATER

THE MDBs ARE SCALING UP THEIR EFFORTS TO PROTECT THE OCEANS, INCLUDING THROUGH BETTER WASTE MANAGEMENT

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THE MDBs ARE SUPPORTING CLIMATE ACTION AND ADOPTING CLIMATE FINANCING AND PARIS AGREEMENT ALIGNMENT TARGETS

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SAFEGUARD POLICIES HELP AVOID AND MITIGATE POTENTIAL ENVIRONMENTAL IMPACTS OF MDB INVESTMENTS

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

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So, here we will see the typology of public finance intervention in support of sustainable finance. So, previously we saw in these, later slides how, some changes have come, across different countries different regions on different SDGs in multiple ways. So, what are those interventions possible, because of financial an intervention in this whole system? So, that is what is laid over here, this is the source UN Environment. So, on this side, we have mechanism, enabling environment and on the second side we have financing or risk sharing.

On the other hand, we have support area, so, financial sector, real sector. So, overall, there are, 4 quadrants, coming over here 1, 2, 3, 4. So, we will see the first one here, we have matching grants, so, financing and financial sector if it matches. So, matching grants, guarantees and other risk sharing instruments, long term credit lines, innovative transactions, government investment guidelines, central banks, pension funds, et cetera long term NPS you may be aware of RBI in Indian case and so on, tax advantage provisions for financial instruments.

So, these are actually things fall under this quadrant 1, quarter 2 in the real sector, we can have grants, R and D subsidies, tax exemptions, national procurement policies, direct fiscal stimulus. The third quadrant, we have 2 capacity building for financial sector stakeholders and data provision. The fourth quadrant we have development, dissemination and training on disclosure rules and other standards related to sustainable finance and capacity building.

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Key considerations for developing principles of sustainable finance

- System-wide**
 - Make a statement defining the long-term objective of the financial sector in the context of sustainability.
 - Agree on an approach to incorporate sustainability considerations to ensure the effectiveness, efficiency, and soundness of the global financial system.
- Disclosure**
 - Establish approaches and methodologies to disclose the sustainability impact, opportunities, and risks arising from financial sector activities as well as the sustainability risks affecting the financial sector.
 - Consider including sustainability information from the financial sector into the policy-making process to ensure that both the financial sector and the other relevant sectors (for example, environment, education, and so on) are directed toward sustainability objectives.
- Business practices**
 - Price sustainability impacts, risks, and opportunities and incorporate them into financial institutions' strategies, governance, and business decision-making processes.
 - Develop transition plans toward sustainable finance, with financial institutions identifying activities to be increased as well as business lines that need to be reoriented toward sustainability.
- Financial Instruments**
 - Agree on criteria to identify financial instruments and specific transactions aligned with sustainability objectives.
 - Define mechanisms to promote innovative financial mechanisms, including through active regulatory encouragement, to increase the depth of sustainable financial markets.
- Collaboration and alignment of efforts**
 - Develop mechanisms to promote and allow collaboration and sharing of information between financial sector participants on approaches, methodologies, and business practices for sustainable finance.
 - Seek alignment of international and national policies, standards, and results measurement to ensure consistent global approaches that fit national needs.

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So, what are the key considerations for developing principles of sustainable finance, so, that is elaborated over here. System wide if you see there are two points, make a statement

defining the long-term objective of the financial sector in the context of sustainability. So, long term objective keeping sustainability context in mind, for the financial sector. Second, agree on an approach to incorporate sustainability considerations to ensure the effectiveness efficiency and soundness of the global financial system.

So, ensuring effectiveness, efficiency and soundness of global financial system SWIFT you may be aware of is one actually transaction exchange medium and these are World Bank and several other in regional banks we saw those are working at different regions to support these well this is just transaction facilitation, this thing, but it also helps in actually moving the funds from one place to another one country to another. So, you may be aware of there are some global currencies dominated by US dollar and many others.

So, the international exchanges actually happen using those currencies, but lately yes, there are other countries and their currencies are also being accepted internationally for example, you may be aware of India is now paying in rupees for its oil imports to different countries. So, that is good initiative actually at world level, there should be, multi-currency, system should be in place, so that every country gets in the equal opportunity and access to these platforms.

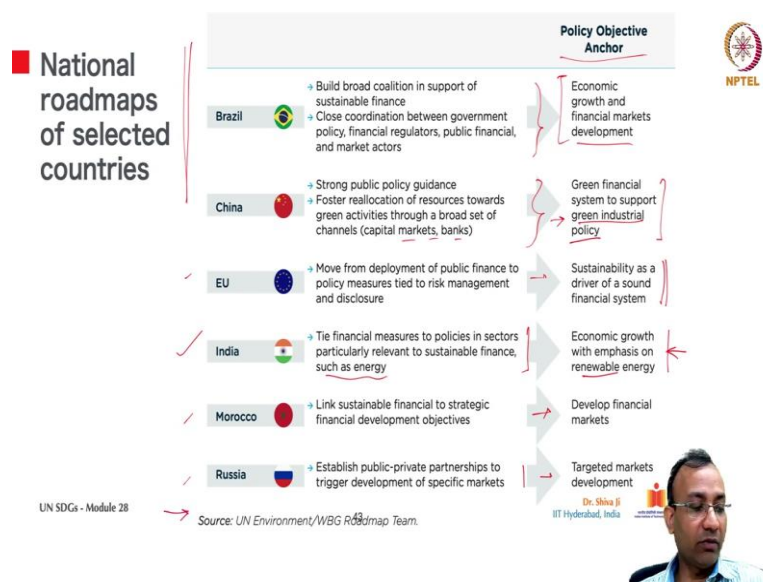
Further on the disclosure, we have established approaches and methodologies to disclose the sustainability impact opportunities and risks arising from financial sector activities as well as the sustainability risks affecting the financial sector. Second point consider including sustainability information from the financial sector, into the policymaking process to ensure that both the financial sector and the other relevant sectors, for example, environmental education and so on are directed towards social media objectives.

So, policymaking process, so the overall focus is towards these goals were the funding or the policies which are going to get involved with that funding, get along with the overall long-term objective of achieving sustainability. So, preparing all of those policymaking processes and sync with that. Third we have here business practices, price sustainability impacts risks opportunities and incorporate them into the financial institution strategies governance and business decision making processes. Develop transaction plans towards sustainable finance with financial institutions identifying activities to be increased as well as business lines that need to be reoriented towards sustainability.

So, business lines that needs to be oriented towards sustainability. And then financial institutions strategies governance and business decision making processes et cetera. The next point we have financial instruments agree on criteria to identify financial instruments and specific transactions align yourselves with sustainability objectives. Define mechanisms to promote innovative financial mechanisms including through active regulatory encouragement to increase the depth of sustainable financial markets.

Next point we have collaboration alignment of efforts develop mechanisms to promote and allow collaboration and sharing of information between financial sector participants on approaches methodologies and business practices for sustainable finance. Lastly, seek alignment of international and national policies standards and results measurement to ensure consistent global approaches that fit national needs.

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So, some of the countries and their roadmaps, so, we can see over here on the last column, we have policy objective anchor. So, what is that anchor which is holding on to this roadmap? So, begins with the Brazil, build broad coalition in support of sustainable finance, close coordination between government policy financial regulators, public financial and market actors. So, the overall policy objective here is economy growth and financial markets development. Second, China strong public policy guidance foster reallocation of resources towards green activities through broad set up channels, capital, markets, banks, et cetera.

Overall objective here being financial systems to support green industrial policy. Because you may be aware of China has the largest manufacturing base of the whole world. So, well,

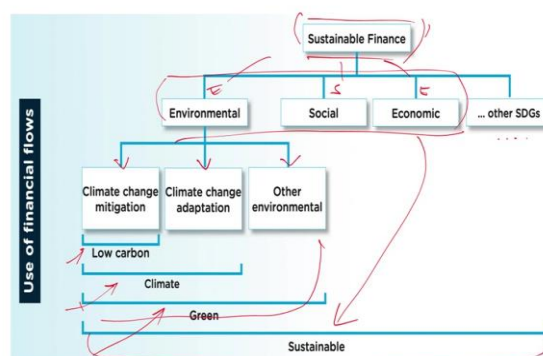
that translates into the highest emissions and consumption of energy and material resources et cetera, alongside this generation. So, that actually should move slowly towards green industrial solutions. Then we have EU move from deployment of public finance to policy measures tied to risk management and disclosures, objectives sustainability as driver of sound financial system.

Third, we have India the financial measures to policies in sectors particularly relevant to sustainable finance such as energy. So, well India, India's emissions are also very high but per capita emission if you see is very low, it is much lesser compared to other words average. So, fairly if you see India is doing wonderful, per capita wise, but yes, more savings, the better it is. So, definitely we can definitely strive for improving, whatever infrastructure we have to the more greener infrastructure for better tomorrow. Economic growth with emphasis on renewable energy.

So, you may have noticed in recent years indicates, there is huge emphasis on developing solar farms, wind farms, et cetera and going forward renewable energy resources. Morocco link sustainable financial to strategic financial development objectives, objective develop financial markets. Russia established public private partnerships to trigger the development of specific markets with the objective to targeted markets development, this is source from UN environment you can look for more details.

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■ Elements of sustainable finance



Source: Adapted from UN Environment Inquiry 2016b.

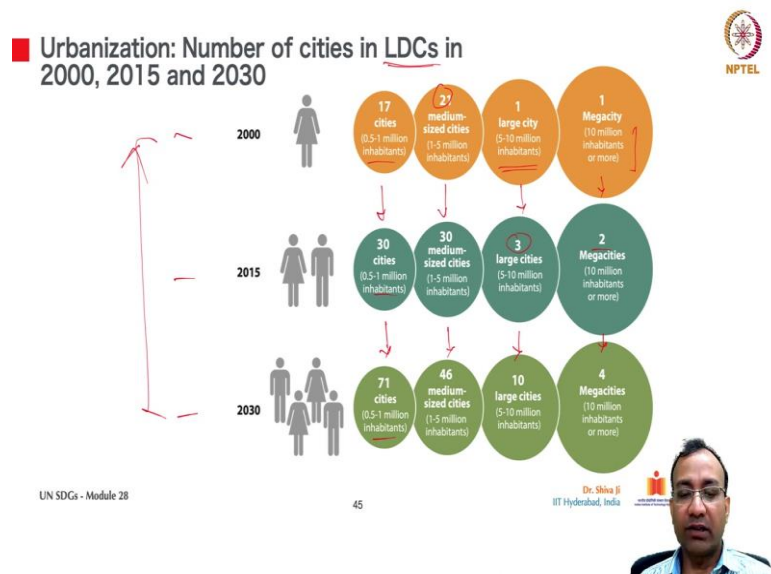


So, in overall this financial system, sustainable finances system, how it touches different aspects. So, you can see of course, ESEs are here. And some more SDGs which may be

beyond some targets, maybe beyond ESEs. So, inside particularly environment, we have climate change mitigation, we have climate change adaptation and other environmental factors and issues. So, this one focuses on low carbon this one comprehensively talks about the climate, this one, if you include all three then it becomes green this thing.

And of course, we know overall covering, these ESEs, formulates sustainable solutions. So, similarly sustainable financial system which serves equally to all three aspects. So, this is adopted from UN Environment inquiry 2016.

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So, now coming down to some number's urbanization, number of cities in low developing countries in the year 2000, 2015 and 2030. So, at a gap of around 15 years, from each let us see, particularly only to the LDCs low developing countries. So, 17 cities here, which grew to 30 cities, in this range and 71 cities it is projected that it is going to be by year 2030. So, the population you can see the cities arrange 0.5 to 1 million 5 lakhs to 10 lakhs. In year 2000 LDCs had 21 medium size cities by 15 it was 30 and by 2030, it is expected to be around 46.

So, you can see, how it is multiplying, it is multiplying more than 100 percent, that is the rate we see this ranges from here 2002 to 2030 in span of around 30 years. On this scale, there was just one large city inhabiting 5 to 10 million, people. By 2015, it was there were around 3 and it is expected to go to 10 large cities, hosting 5 to 10 million inhabitants and 1 mega city mega city scale, 10 million or more 1 crore plus.

So, there was just 1, but by 2015 there were 2 and it is expected that there will be 4, where 1 crore plus people will be living, this is only about LDCs. So, you can see the concentration of

population in LDCs is also getting very high, more than 10 million plus at one place is humongous task to manage and provide resources.

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Public financial management cycle



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Source: UN DESA.
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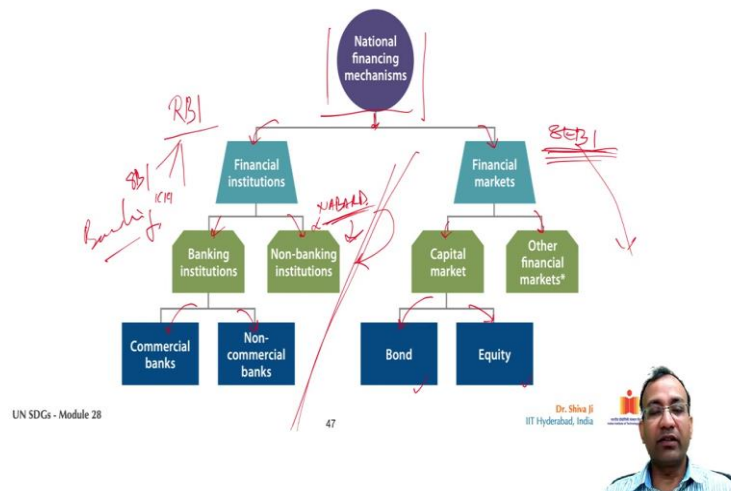
So, how this whole financial management cycle works in the public domain. So, here we have the government in the center, managing all of it and then it starts with the public policy development the parliament governments and the state governments, central governments they frame these policies. Accordingly, it comes to the budget formulation you may be aware of every year Indian government actually presents its annual budget, based on those policies, whatever there are no priority areas for the government to work on, for the next few years or accordingly they are locating funding and resources.

And then it goes to the budget approvals then it goes for implementation execution et cetera, then accounting and reporting taking stock of what is going on what is happening, how much extent it has happened, et cetera auditing et cetera, when it comes to the final external auditing. So, when Indian scenario you may be aware of CAG, Comptroller and Auditor General of India. And there are many other auditing agencies independent auditing agencies, there are International Auditing agencies also for certain things.

And then again, from their they take the total stock of the situation, then CAG also presents report to the government about its findings correction suggestions et cetera. And then again, which becomes an instrument in helping, further newer policies, refined policies, et cetera, and the cycle actually goes on. So, similarly, it works in multiple lot of countries, more or less in the similar fashion.

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■ National financing mechanisms



Overall national financing mechanisms, how it works? So, here we have this national financial mechanism. So, it has financial institutions and it has financial markets, so, 2 components and in financial institutions, we have banks and non-banking institutions also are there. In banks, it goes to commercial one not for noncommercial ones. So, this gets divided into 2 here we have miserably like, banking, sector banking related and then on this side we have financial markets.

So, open capital markets, other financial markets. In capital market, you can go through if you are aware of share, bizarre activities, or how it transact it transactions. So, you may be aware of about bonds, bonds equities and other instruments which as individual you can buy or you can also participate companies actually raise funding from the market. So, investors, common public or even large financial institutions, they invest and it builds up the whole line of financial market situation.

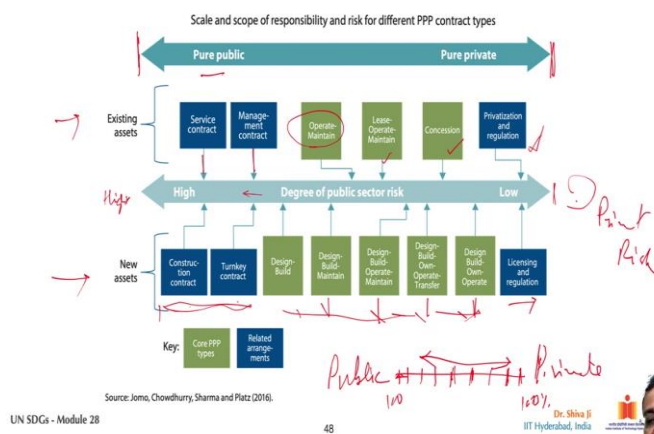
That in turn helps investing into infrastructure project, development projects and projects of multiple varieties depending upon the focus and objectives and regulator schemes, which further helps, the other side, other side actually helps financial markets, by making, friendlier policies, safeguarding, their investments minimizing the risks, et cetera, et cetera. So, this is how national financial mechanisms actually work. So, you may be aware of the effects financial institution in the body is RBI and under RBI there are banking institutions led by public sector SBI, and other private sector bank.

So, there are many just to name few there are some non-banking institutions also maybe you are NABARD and many others, which work, for the development of the country, but particularly to some specific sectors only this works for Rural Development NABARD. So, it lends also like, the money helps in infrastructure projects is helping execution and some plans schemes et cetera, et cetera. So, similarly, I gave you example here, so, again RBI controls, these institutions also.

But here one of the major controllers is SEBI Securities and Exchange Bank of India. And SEBI actually takes care of transactions and things in financial markets. So, SEBI works as the main controller over here. So, this is how collectively the national financing mechanism works in the Indian scenario. Similarly, there are agencies in different other countries also on the same lines.

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Variations of PPPs and distribution of risk



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Source: Jomo, Chowdhury, Sharma and Platz (2016).

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Variations of PPS and distribution of risks. So, here if you see there are 2 poles pure public and pure private. So, scale and scope of responsibility and risk for different PPP contract types. So, here we have if it is pure public, the degree of public sector risks, on this side is very high. And public sector risk on this side is of course low because this is not public sector activity, but yes private sector risk is going to get very high on this side.

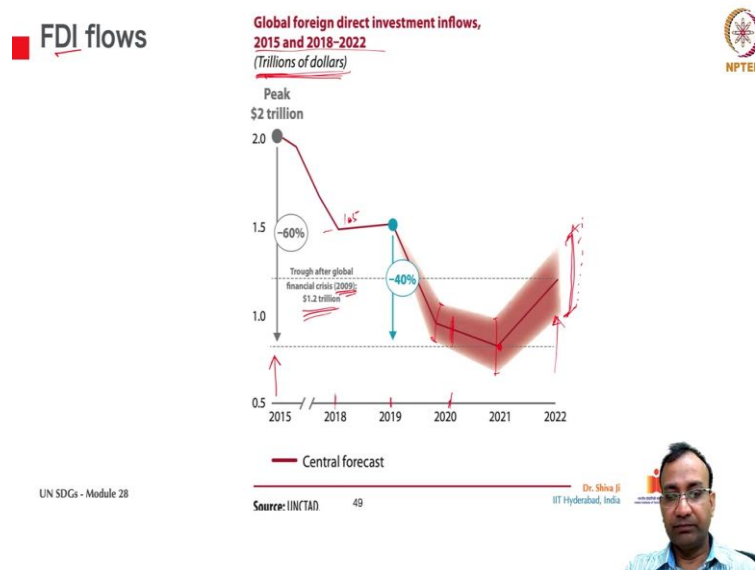
So, in between existing assets, if you see we have service contracts here management contracts, then in between we have PPP types operate maintain even if we are offering such format, so, these days coming up for example, managing, toll gates, managing, maybe highways, managing railway stations or managing airports, multiple such initiatives were

actually taken up in the recent years. And there are many, operations going on across the country these operate and maintain this thing.

Then giving some concessions then it comes from totally into the private area. Total privatization or regulations et cetera. Then again in the new assets, if you see this is about existing assets, new assets, construction contracts, turnkey contracts, are totally in the public sector, unrelated arrangements. And here we have these 5 green ones this talk about design and build, design build and maintain, design build operate and maintain, design build own operate and transfer, design build own operate, and then licensing and regulation, you totally own, in the private sector.

So, you can see now, there are multiple segments, which have come up in this whole spectrum. So, from fully public to fully private, there is provision of having some varied degree this arrangement. So, not 100 percent public or not 100 percent private, but it is possible to have maybe 60-40, 50-50 or 25-75 or maybe 10-90 or whatever. So, this thing is possible and there are several such examples.

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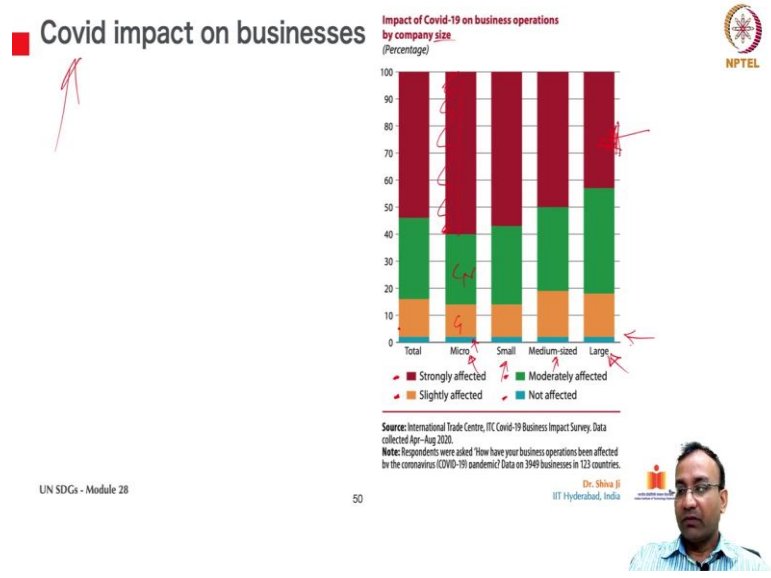


So, this is also new phenomena in the recent decades. Now, we will see about FDI's flow, foreign direct investments FDI. So, here global foreign direct investment inflows 2015 and 2018 to 22 in trillions of dollars you see this humongous currency unit taken over here. So, in this one if you see it peaked at 2 trillion dollars, around year 2015, and then it started actually coming down. So, here you see minus 60 percent, it came to 1.5 trillion dollars, by year 2018.

And in 19 it grew little bit, but still 40 percent in fall you will see from here trough after global financial crisis of 2019 1.2 trillion dollars is the volume given over here.

By 2020, it is here, close to in the range of 1, by 2021 it is touching its lowest point here, close to around 0.7 or so, and then it is expected that 2022 it is going to rise, but yes, there is this range also which is projected. So, you can see there is not one actually frame, but it is range it can be anywhere from this to this. So, this is this forecast.

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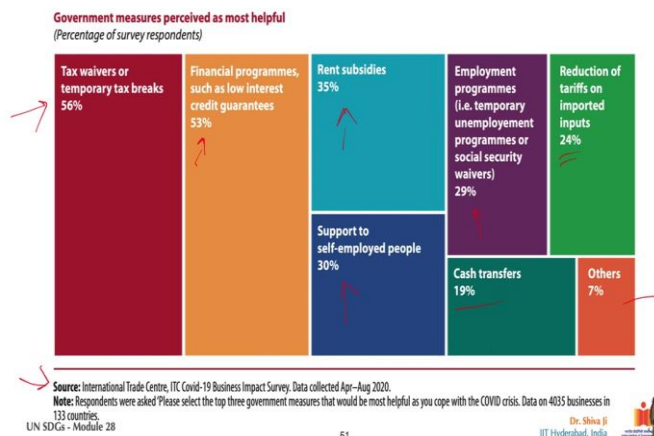
So, what has impacted these businesses in that COVID is one of their major ones in the last 2, 3 years. And how much it has kind of impacted, that is given here in percentage numbers impact of COVID-19 on business operations by company size. So, you can see here the second column micro scale industries, small scale medium sized and large scale industries and color notation red strongly affected, yellow slightly affected, green moderately affected and blue no effect.

So, in the micro if you see strongly affected has the largest share from this range almost 60 percent of this entire range is strongly affected 60 percent. Then we have moderately affected here by green then slightly affected by yellow and no effected very few I think it should be if this is 5 maybe close to 2 to 2 and half to 2.5 percentage only are not affected rest are all badly affected. And in on all of these columns if you see these not affected actually range is more or less similar volume wise.

But gradually if you see strongly affected share has reduced, in the large industrial sector large business possibilities in this thing.

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Govt measures

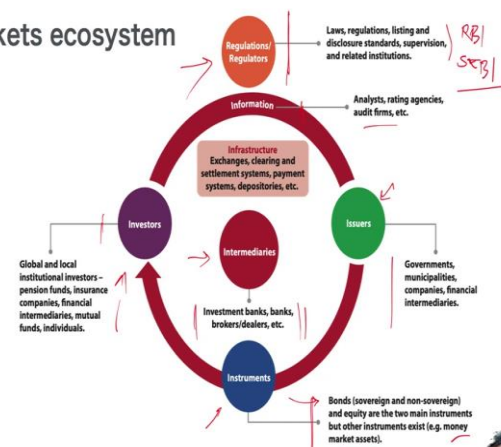


Then we have some government measures, perceived as most helpful in this scenario. So, you can see and you can observe the percentage also, this is surveyed response, which is summed up over here, source International Trade Centre. So, tax waivers or temporary tax breaks, 56 percent of survey respondents and they have suggested this and very close 53 percent, have suggested for financial programs such as low interest, credit guarantees, et cetera.

Then rent subsidies by 35 percent, support to self-employed people 30 percent, employment programs temporary unemployment programs or Social Security waivers 29 percent close to one third. And then we have 24 percent reduction of tariffs on imported inputs, cash transfers, 19 percent and others were all in 7 percent target.

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Capital markets ecosystem

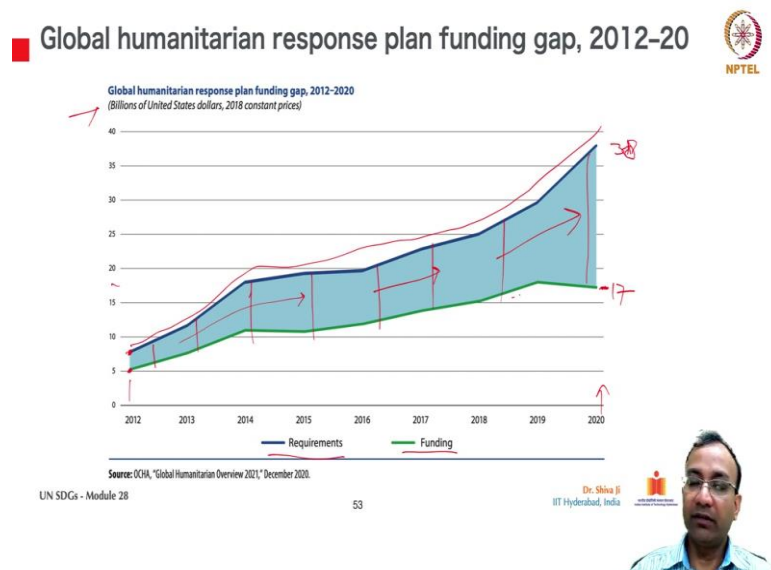


So, how this whole capital market ecosystem works? So, you can see we have regulations regulatory bodies coming at the top and they deliver this information sets that goes to the issuers and from here it goes to the instruments back to the investors then again it comes in and forms this loop. In between we have intermediaries, infrastructure exchanges, clearing and settlement systems, payment systems depositories, et cetera. Well intermediaries if you see investment banks, banks, brokers, dealers et cetera.

So, regulatory framing laws regulations controls listing disclosure standards supervision and related institutions RBI and SEBI we spoke off in the previous slide. Then for information in analysis, rating agencies, audit firms et cetera. It goes to the issuers governments, municipalities, companies, financial intermediaries. Then instruments one of the examples of instruments is the bonds. So, sovereign and non-sovereign and equity as the 2 main instruments but other instruments also exist money and market assets et cetera.

Investors, global and local institutional investors pension funds, insurance companies, financial intermediaries, mutual funds individuals et cetera.

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Global Humanitarian Response Plan funding gap 2012 to 20. So, here you see it is rising we have requirements and green in funding. So, requirement stood in the year 2012 at around 7.5 something and funding was again the tune of 5 and gradually if you see this gap is widening. Ideally it should this gap should be bridge there should not be any gap. Rather funding should be available in surplus and whatever your requirement is we have enough funds and that kind of situation should be ideal, but that is not happening if you see this gap is rising.

So, lesser and lesser funding is now available for more needed humanitarian responses. So, figures you can see which is given in billions of US dollars 2018 constant price. So, in 2012, the range was 5 to 7.5 and here 2020 it came down, it came up to here, this is around 17 here to around 38 or something. So, this is the range.