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2008年危机后多边开发银行在亚洲和新兴国家中的角色 The Role of Multilateral Development Banks in Asia and Emerging Countries Post-2008 Crisis

2008 年危机后多边开发银行在亚洲和 新兴国家中的角色

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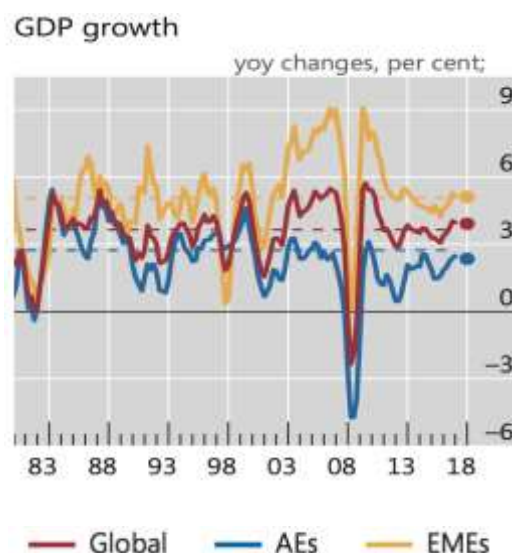
目录

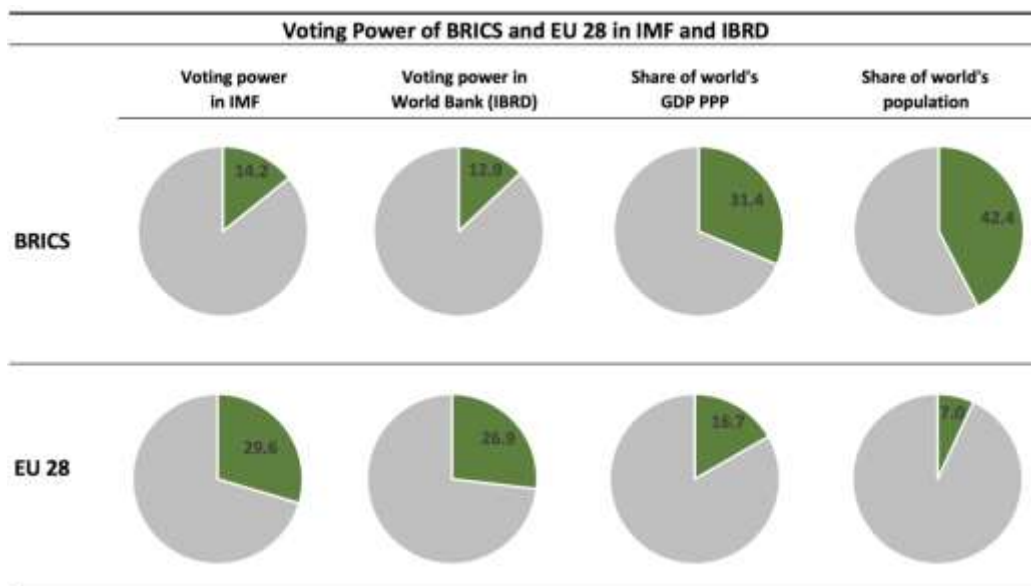
一、关于 2018 年金融危机.....	2
二、关于新多边开发银行的角色和机会.....	5
三、私人投资者和机构投资者在基础设施方面的缺口和局限性 ...	8
四、关于成功的赶超模式.....	10
五、关于一体化连通型智能基础设施.....	11
六、发展融资机构积极行动蓝图.....	13
七、前进的道路：共同合作并构建混合型平台	16

2008 年金融危机后，大量资本流入亚洲地区以及其他新兴市场和发展中国家（EMDCs），导致资产价格暴涨、央行资产负债表扩张以及公共和公司债务股增加。发展中国家面临着同发达国家一样的境况。

因此，为了恢复金融稳定、改善债务管理、缓解系统性风险，国际货币基金组织（IMF）、世界银行（WB）、国际复兴开发银行（IBRD）、国际清算银行（BIS）、联合国贸易和发展会议（UNCTAD）等传统发展融资机构都带头提出了若干重要议程和倡议。

虽然金砖国家以及其他新兴市场和发展中国家是推动此项议程的重要利益相关者：2017 年，其人口占全球总人口的 42.4%，对世界 GDP 增长的贡献率达到了 31.4%；算上其他新兴市场和发展中国家，其对全球增长的平均贡献率为 72.3%（2010-2017 年）。但是，金砖国家以及其他新兴市场和发展中国家在大多数传统多边金融机构中依然占席不足。下图中的数据表明，这些国家在国际货币基金组织中仅享有 14.2% 的表决权，在国际复兴开发银行中仅享有 12.9% 的表决权，而对世界 GDP 贡献率仅为 16.7% 且人口仅占世界总人口 7% 的欧盟（EU），在国际货币基金组织和国际复兴开发银行中享有的表决权却分别高达 29.6% 和 26.9%。





资料来源：国际货币基金组织和国际复兴开发银行网站上的表决权数据。国际货币基金组织《世界经济展望》数据库中截至2017年10月的GDP和人口数据（2018年）

由发展中国家推动的多边开发银行共同努力，以帮助重塑有关金融稳定和发展融资的传统标准和指导方针，这一点很关键。通过向贷款人提供新的方法、推出新的金融工具以及支持可持续项目，多边开发银行可以证明，国家主权和可持续性（低碳和金融）是至关重要的。

除了为项目融资和风险缓解提供技术知识外，多边开发银行还能与传统资金来源形成互补、促进股本增长，从而减轻各国政府因基础设施项目需要大量投资而承受的财政压力，同时又能促进社会福利、提高资产回报率并帮助实现可持续发展目标（SDGs）。

一、关于 2018 年金融危机

2018 年恰逢 2008 年金融危机爆发十周年。美国金融危机调查委员会¹报告称，导致该次金融危机的因素包括多年过度放松管制和高风险影子银行业务的扩大；公司治理和风险管理的失效，杠杆率过高且过度依赖短期资金；监管者缺乏对金融市场风险和相互联系的认识；主要金融机构问责制的系统性故障；信用评级机构的失效；抵押贷款和证券化运行的低标准；场外衍生品和合成型债务抵押债券的任意扩散等等。

为了减轻金融危机的后果、避免最糟糕的情景，国际上采取了一套四项主要政策：1) 对金融机构进行救助；2) 采取反周期创新措施；3) 维持世界贸易；4) 旨在提高金融稳定性、缓解金融风险的新指导方针。在 G20 国家及其机构的共同努力下，这四项政策得到了全面实施，不断发展，并取得了一定效果。

值得一提的是，在 2008 年金融危机爆发后，世界银行、国际货币基金组织等传统国际金融机构的官员进行了内部辩论，以估计该次危机的影响并制定后续政策。其初步评估指出，该次金融危机后果的持续时间不会超过 4 年，因为当时数据显示，金融危机的影响通常会在 3~7 个季度后消弭，而据林毅夫教授称，在复苏期间，只要将 GDP 增速提高 1-2%，就能重建经济损失。

如美国，其金融体系是 2008 年金融危机的发源地，为了保证经济复苏，预计每年 GDP 增速应在 4%~5%，但美国尚未达到这一增长率。事实上，二战后，美国的年均 GDP 增速往往保持在 3%-3.5%，但在 2017 年仅为 2.2%，2018 年为 2.9%，据高盛研究称，2019 年预计将放缓至 2.5%²。国际货币基金组织还指出，在未来十年间，美国的 GDP 增速或会进一步下降。因此，2008 年金融危机爆发十周年之际透露的一个信号是，这场危机的震中，也是全球最强大、最先进的经济体，尚未完全复苏，这同样也是欧元区、日本等其他发达经济体所处的境况。

¹如需更多信息，请访问：<https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>

²参见高盛，2018 年：<https://bit.ly/2SxUacm>

还需注意的是，当一个国家存在危机时，说明这个国家存在严重的结构性问题。因此，为防止危机恶化或引发新的危机，必须进行一系列的结构新改革。通常，结构性改革会从长远角度提振经济、缓解系统性风险，但在各国实施结构性改革期间，经济会进入收缩模式，由于危机后的前景以低经济增速和高失业率为特点，政府很难进行结构性改革，而且这种改革也不受民众欢迎。实际上，高收入国家如今已避免采取结构性改革，相反，这些国家利用纳税人的钱维持其经济运转，主要是利用央行——和债务——作为缓解风险和维持经济的杠杆。

其他金融危机表明，不仅那些过度使用杠杆的政府面临债务危机风险，而且企业部门及其货币错配和时间错配、股票市场的基础性失衡或不可持续发展也会引起震荡、恐慌和危机³。在量化宽松（QE）期间，低利率债券取代高利率债券，帮助政府减轻财政负担、进行债务展期，这主要发生在发达经济体。然而，据国际清算银行估计，高收入国家的政府债务总额将从 2007 年底之前的 33 万亿美元攀升至 2018 年末的 60 万亿美元⁴。

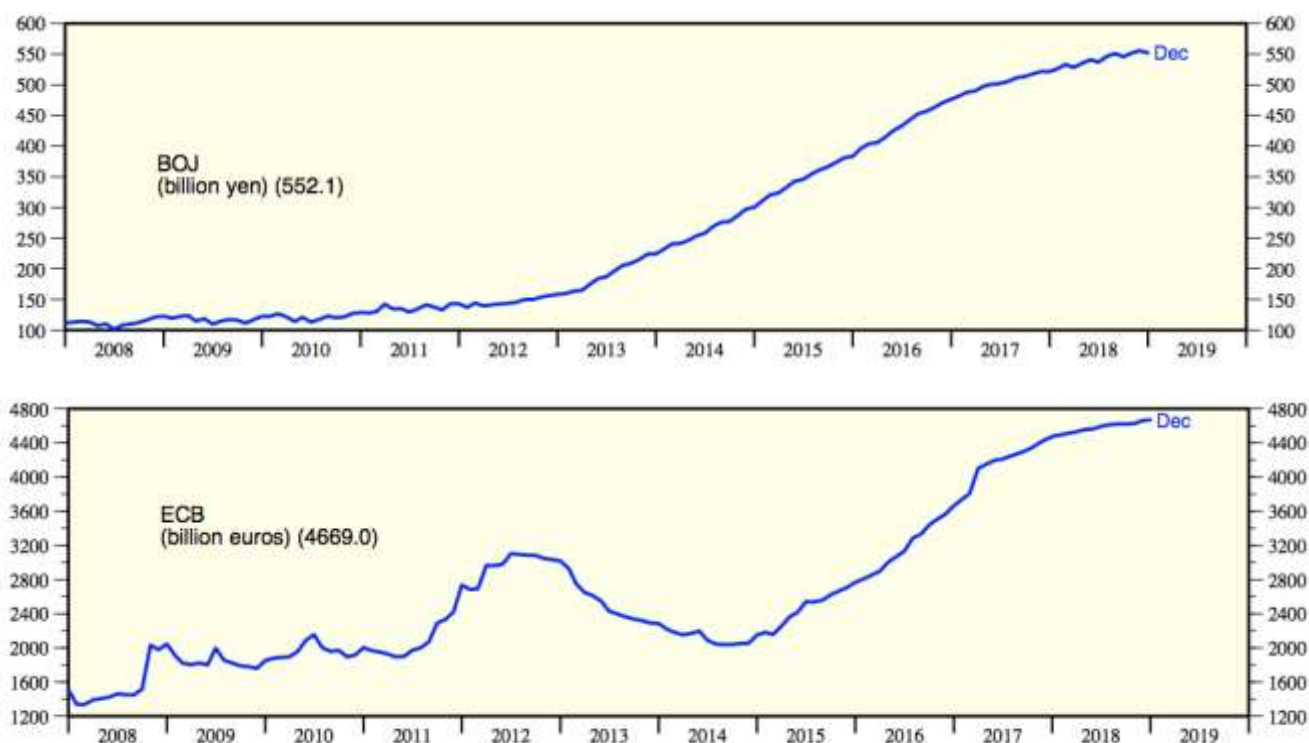
若量化宽松期间发生紧缩，借款成本将升高，使负债政府和企业部门压力增加，提高了违约风险。发达国家和新兴国家政府和私营部门仍有进行调整和改善的空间，防止其资产负债表数字激增和风险过高。发展融资机构可调动资本和专业技术为所需的大量投资进行融资，因此当然是克服这一挑战的合作伙伴。



³参见 Jaime Caruana, 2017 年：<https://www.bis.org/speeches/sp170206.htm>

⁴参见 Credit Suisse, 2019 年：<https://www.credit-suisse.com/uk/en/private-banking/learn-more-about-market-trends/assessing-global-debt.html>

主要中央银行的总资产（2008-2018 年）



2008 年金融危机后出现的一个主要政治亮点是金砖国家（巴西、俄罗斯、印度、中国和南非）等新兴国家通过改善制度和治理的方式缓解风险、实施反周期创新从政策或支持国内经济和全球贸易发展在全球舞台上扮演的角色。从这个意义上说，基础设施、可再生能源、城市化和科技行业发挥了重要作用，并且在促进发达经济体和新兴经济体经济增长方面仍有巨大空间。

二、关于新多边开发银行的角色和机会

首先，为了强化新的共识，有必要对新的问题进行辩论，如：多边开发银行如何为全球经济的更加繁荣做出贡献？2030 年如何实现联合国于 2015 年提出的可持续发展目标？

为此，本报告建议将多边开发银行分为两类。第一类，主要由发达国家创办且目前仍由发达国家推动的传统多边开发银行，如世界银行；第二类，主要由发

展中国家设立和推动的多边开发银行，如新开发银行和亚洲基础设施投资银行。第一类多边开发银行以高收入国家的经验作为其核心指导方针，指导对发展中国家的决策。第二类多边开发银行以发展中国家的经验、理念和观察作为其核心指导方针，且更愿意利用这些实践知识帮助其他发展中国家实现其政策目标。

新开发银行（NDB）、亚洲基础设施投资银行（AIIB）等新多边开发银行的设立也代表着金砖国家的崛起，尤其是在 2008 年金融危机后。2017 年，这些机构对全球经济增长的贡献达到了 31.9%，若算上其他新兴市场和发展中国家，自 2010 年以来其对全球经济增长的总贡献率已经达到了 72.3%；反观发达国家，特别是欧盟，其经济前景依然萧条，尚未出现反弹。此外，这也体现了一种更为分散、多元和综合并鼓励推动联合国治理改革、全球金融架构和稳定性改善等新议程以及低碳可持续发展议程、金融可持续发展议程的新国际动态。

新多边开发银行理解某些措施的有效性取决于先决条件，并且高收入国家和发达国家的情况有所不同，而传统机构却不能对发展中国家的赶超之路提供支持。真实证据才是最重要的衡量标准，而不是善意或精心设计的指令，有关数据表明，传统多边开发银行在缩小发达国家与发展中国家之间差距方面所取得的结果是令人失望的。

要取得新的结果，必须设计新的理念，以推动新范例和新政策的出台。此外，多边开发银行和其他国际融资机构能够提供的资金和技术支持也很重要，可以帮助发展中国家筹备可资助的项目、利用成功的运作经验、维护共赢的关系，避免这些国家面临经济停滞和另一个失去的十年，重蹈日本（失去的 20 年）、以阿根廷、巴西和墨西哥为代表的拉美国家（失去的 10 年）的覆辙。

新多边开发银行旨在推动可持续发展目标（SDGs）的实现，因此是任务导向型机构。虽然这些机构对全球 GDP 的贡献率已从 55% 增长到 60%，但全面完成此项议程仍有很长的路要走，需要各机构持续努力、通力合作。在此过程中，

基础设施和工业化是重要的行业。要实现前述目标，新多边开发银行可通过体制创新，调动各类资源，把发达国家和发展中国家的成功经验结合起来，以使各成员国（MCs）国内成功实施的新倡议和新理念达到最大效果。这样，多边开发银行能够为发展中国家的赶超提供支持，也能为实现可持续发展目标铺平道路。

不过，当这一天到来时，或许就不再需要多边开发银行了。

本报告强调，多边开发银行和其他战略合作伙伴之间实施联合行动和跨境倡议的空间巨大。可联合资助相关倡议，如亚洲和其他新兴地区的多边开发银行联合投资平台，此外还可建设进行项目准备的友谊设施、复制最佳实践、进行风险和技术援助。

多边开发银行成员国正面临着经济、人口和气候变化挑战，其中需要特别注意的有：高人口压力和增长；青年困境和就业创造；农村迁徙和城市规划挑战。

虽然许多发展中国家的出生率较高，却面临着非法移民、难民和内战等问题。因此，在这些国家建造基础设施所需的成本更高并涉及其他需要了解和解决的问题。在一些接收了大批难民的国家中，其人口激增了 5% 左右。如何解决这些国家对新学校、新医院、环境卫生、水处理等的基础设施需求和财政负担？此外，沙特阿拉伯等中东国家的人口中，70% 均在 30 岁以下。这些国家面临的挑战是在未来几年里，如何为这些青年人口提供就业机会？坚实的私营部门至关重要。

气候变化已经产生了需要适应和缓解的负面影响。应对气候变化需要大量资本支出，这些支出主要由政府承担。

此后，多边开发银行需要与成员国协作解决这些全球性挑战。在美国货币政策调整和贸易关系紧张的背景下，融资或获得资金的成本不断增加，给发展中国家带来了额外的负担。这也引发了外汇汇率的不稳定以及资本从发展中国家流入发达国家（外汇储备减少），导致许多国家发生货币贬值，造成了进口通胀。

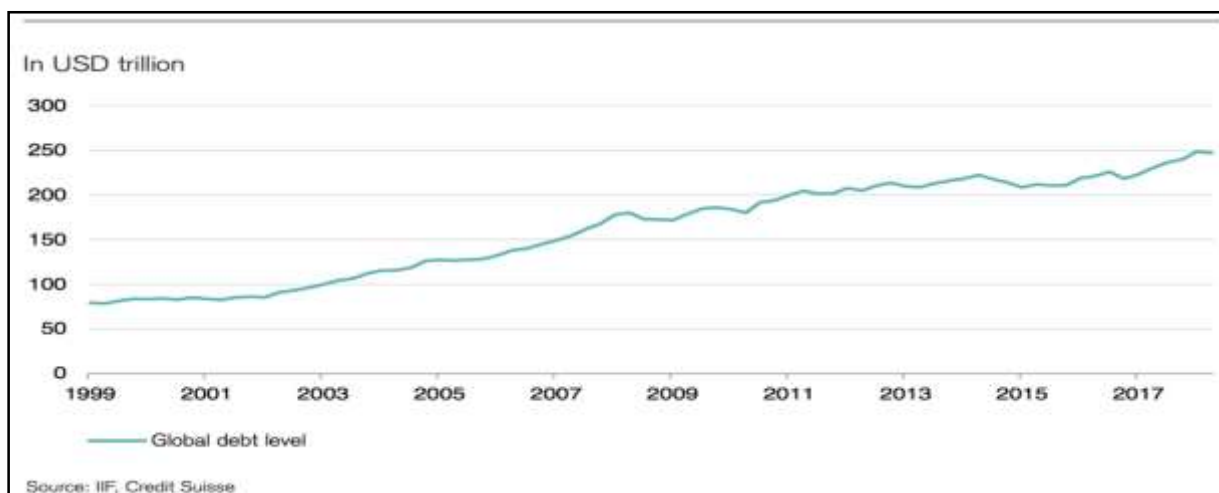
油价也带来很大的不确定性，表现为地缘政治不稳定和石油生产投资较低。此外，一些国家把石油用作基础设施部门的一种燃料，如设火电厂的孟加拉国。油价的上涨将提高其基础设施建设成本。

资产价格趋涨也是一个需要解决的问题，如住房和股市，许多情况都似乎是泡沫破裂前的景象。成员国各自处理这些问题的财政负担并不是最优政策。开发机构，不论是传统多边开发银行还是新多边开发银行，都能缓解这一财政负担，此外还能更有效地强化和加速产生政策效果。

三、私人投资者和机构投资者在基础设施方面的缺口和局限性

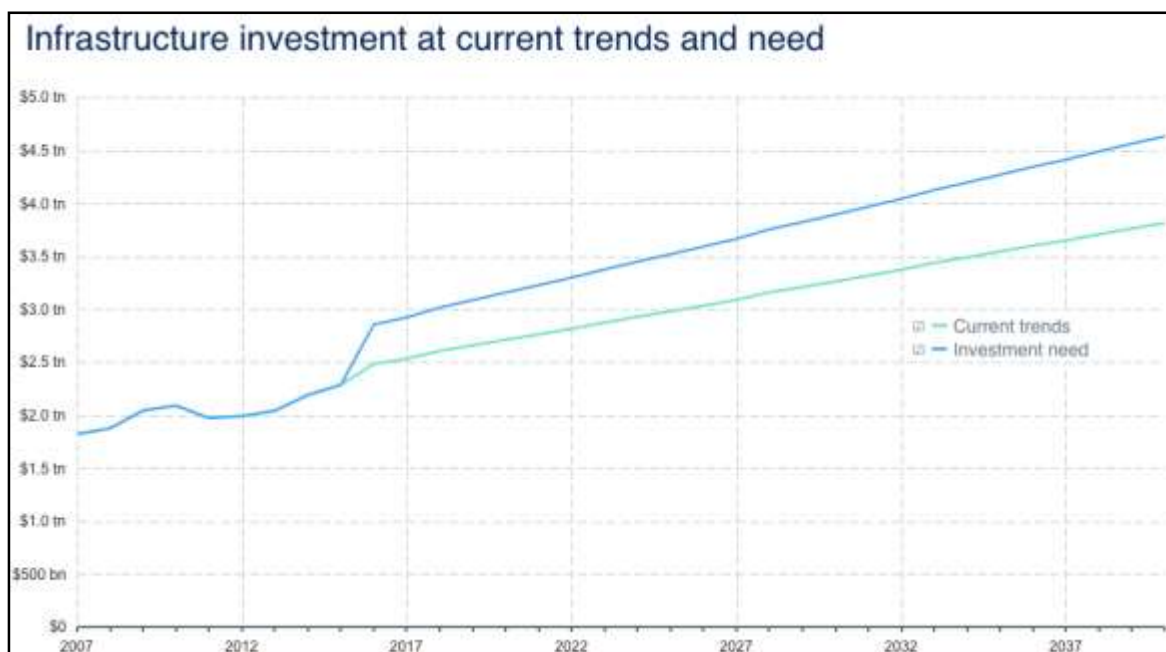
据各类机构（G20、麦肯锡、国际清算银行）研究估计，未来 20 年，基础设施投资总额占全球 GDP 的比重应从 3.6%左右提高至 5.5%。在这些额外的投资努力中，大多数为新兴国家所需，以解决国内的基础设施建设瓶颈、城市化发展需要以及加强贸易一体化和数字互联互通过程中的挑战。据 G20《全球基础设施展望》估计，发展中国家的年度增量投资需求超过 1 万亿美元。发达国家也将需要增投同等金额，用于更换国内的大型基础设施和发展低碳能源，在 2030 年实现其对可持续发展目标的承诺。到 2040 年，《全球基础设施展望》估计将需要 94 万亿美元的投资，其中 79 亿美元将按照当前趋势进行投资，此后将出现 15 万亿美元的投资缺口。

而且，自 2008 年危机以来，全球债务增长速度正在加快，据国际金融协会（IIF）称，全球债务已达到近 250 万亿美元或全球 GDP 的近 300%。因此，考虑到几乎所有国家对巨额额外政府债务的限制以及巴塞尔协议 II 和 III 标准中对银行业实施的更严格监管，这些标准限制了商业银行提供长期信贷的能力，需要采取一些创新的方法，以便为基础设施建设调动补充性资金来源。



多边开发银行和国家开发银行（MDBs 和 NDBs）等发展融资机构（DFIs）以及出口信贷机构（ECAs）应继续发挥其作为基础设施融资主要提供者的重要作用。鉴于其股东成员国或本国为其提供的支持和担保，这些机构有能力保持合适的资本金比率并以更低的成本获得期限较长的融资。尽管如此，如果发展融资机构帮助开发新的市场工具并为基础设施融资开发其他长期资金来源，这些机构的“火力”可能会有所增强。

养老基金、保险公司、主权财富基金等机构投资者持有大量长期负债，理论上，可提高长期资产投资在其投资组合中的比重。有数据表明，该类投资者的全球投资组合预计达到 90 万亿美元左右。但是，这些机构的债务或股权组合中，基础设施所占比例依然很低，因而增长潜力较大。



资料来源：2019 年《全球基础设施展望》

四、关于成功的赶超模式

世界上每一个国家，包括现在的富裕国家，就在大约三个世纪以前都曾是贫穷的经济体。此外，这些国家有一个共同点：它们都曾是农业国。事实上，历史经验表明，要实现成为高收入国家的目标，工业化是最有效的策略，也是达到较高人均 GDP 的最强有力的杠杆，因其固有的劳动单位生产率较高。但是，为了实现工业化，必须推动基础设施建设，以便形成支持工业化进程的必要结构。另外，基础设施有助于提振国内市场并构建以竞争方式支持出口导向型行业的平台。

即使考虑到可持续发展目标及其包括的所有小目标，创造就业依然是最重要的方面，因为就业可以让人们挣得工资，通过提高商品、服务和食品消费在工资中的比例，增加总需求、刺激国内市场。除了有助于解决营养和贫困问题外，因

实际工资增加而导致的总需求增加可提高经济活力，激励企业家进行投资和创新。从这个意义上说，创造就业的关键就在于工业化和基础设施。

然而，人们可能会认为工业化对国家而言是一件非常简单的事情，这是一种误解。二战后，在全球 200 多个国家中，只有少数几个国家成为了高收入经济体。韩国就是一个成功赶超的范例。如今，中国等国家正在为从低收入国家发展为高收入国家做准备。此外，那些未采取赶超措施的国家并不是不想赶超，而是在思想上和/或战略上犯了错误。

2018 年恰逢中国实行开放政策 40 周年，中国从一个贫穷的农业国发展成为全球最具活力的中心之一。是什么成就了中国？有人会说是过渡；这确是一个普遍现象，所有社会主义国家过去都处在过渡时期，但它们中的大多数都不像中国那样稳定。这些国家要么面临经济崩溃、经济停滞，要么受到金融危机的冲击。实际上，中国已根据自身的具体经济发展状况、制度及技术安排，实施了本国的新结构性金融经济措施，但仍然面临着经济挑战。

少数成功的经济体还有其他共同特点：首先，它们过去及现在依然非常务实。这些经济体选择了工业化并从工业产能较低的水平开始实施其发展战略，通过巨大的社会努力，一步一步发展起来。其次，虽然良好的治理、良好的制度和良好的环境被广泛认为是成功的决定因素，但值得一提的是，在工业化之初，这些成功的经济体制度薄弱、治理不善且基础设施缺口严重。务实，反过来，仍然是一个有效的解决办法：所做的事情以已具备的条件（而非期望具备的条件）为基础；而想要达到的目标则可作为其政策指导。第三，成功赶超的国家均已发展为市场经济，但这些国家都有一个积极有力的发展型政府，可平衡工业化进程中的各项挑战。

五、关于一体化连通型智能基础设施

在物联网（IoT）领域，当前经济社会制度和活动的快速数字化为基础设施的更高效运行提供了一次特别的机会。在基础设施系统中提高生产率、降低成本具有巨大潜力，不容忽视。

例如，数字化智能电网可极大地提高电力分配的效率，与供水和污水系统一样，从而进一步促进基础设施的可持续发展。此外，在不久的将来，由于连通式智能数字平台的普及，与零售和批发活动有关的城市交通流量、城市 LED 照明系统、商业运输以及物流的效率可实现更高层次的优化。

新的计算范例已经促成了效率的指数式增长和成本降低，为机器人、自动化、大数据分析和分布式账本技术（DLT）以及信息和通信技术（ICT）的发展释放了新的动力，从而推动新一代基础设施（3.0）和发展融资工具的发展。因此，智能合同、无人驾驶汽车、船舶和起重机、优化清关和物流、风险缓解以及文书工作的减少将会成为新的业务⁵。

值得一提的是，一些倡议利用这些新技术来提高项目交易的透明度、可追溯性和效率以及在使用公共资源过程中推动融资发展，如巴西国家银行（BNDES）和德国国有开发银行德国复兴信贷银行（KfW）合作管理巴西亚马逊基金，其投资组合中有 96 个项目正在进行中⁶。

因此，新基础设施的规划和设计忽视了通过物联网的传播应用先进信息技术在当下来说是不可思议的。在这一方面，发展融资机构（DFIs）应发挥主导作用，引导项目设计人员和工程公司在构思基础设施项目时应用新一代信息和通信技术。此外，为了补充私营部门调动的大量投资，发展融资机构还为服务匮乏的地区提供专业技术和廉价资本，以完善其基础设施框架，从而促进当地的贸易和发展。

⁵如需更多信息，请参见：2019 年亚洲基础设施融资报告，亚洲基础设施投资银行。

⁶参见巴西发展银行，2018 年：

<https://www.bndes.gov.br/wps/portal/site/home/imprensa/noticias/conteudo/tecnologia-blockchain-sera-objeto-de-cooperacao-entre-bndes-e-kfw>

六、发展融资机构积极行动蓝图

为了扩大基础设施投资规模，必须脱离对基础设施资产特殊性的认识。首先，基础设施项目通常具有资本密集度高、周期长的特点。由于项目完工并开始产生正向自由现金流前，初始设计、规划、施工设计、施工、测试和试产等阶段需要花费数年时间，因此前期对资本和/或融资的需要往往很大。

基础设施项目还涉及经济和社会效益、外部效应以及对生产率、就业和竞争力的乘数效应，难以估计其具体情况。此外，这类项目的结构设计往往要经历复杂的流程并牵涉众多参与方和当事方，如建筑承包商、出资人、债务持有人、保险公司、运维承包商、监管机构、采购主管当局、使用者和金融机构。这种描述本身就暗示着极大的信息不对称、利益相关者之间的利益冲突，同时还强调了协调与合作的必要性。

因此，为了提高基础设施项目的吸引力、缓解项目风险，发展融资机构应协助政府：

A) 开发大量成熟且结构良好的项目：基础设施项目的结构设计是一项复杂的工作，需要：

a) 制定详细的技术规范和施工设计；

b) 预测需求；

c) 可靠而一致的法律框架和相关合同；

d) 明确担保、保险和激励措施，确保项目顺利完成；以及最后但同样重要的一点，

e) 设计恰当的财务模型和招标程序。

上述工作都是技术性工作，需要具备专业知识，但可使总投资额降低 5%~8%。另外，大型项目的筹备和结构设计工作非常耗时，大约需要 18 个月才能完成。

因此，开发大量项目可产生相关的外部效应，从而为整体经济带来显著效益。这是实现基础设施可持续、可预测扩建的一个前提条件。

因而值得政府和发展融资机构通过设立项目筹备资金或基金提供财务支持。

B) 寻求项目风险的缓解并具备银行可担保性。对此，考虑到基础设施项目周期较长的特点，这类项目主要有四类风险：

- a) 监管和政治风险；
- b) 宏观经济和市场风险；
- c) 施工设计和施工风险或技术风险；
- d) 不可抗力风险。

这些风险需要分别制定具体的缓解措施和/或法律条文。

下文对这些风险的说明指出了基础设施投资容易受市场失灵与不确定性影响的方式。由于这些风险太大或难以通过投保缓解，因此需要公共机构和政府政策进行实质性的风险缓解，确保基础设施项目的可行性。

监管和政治风险难以预测，必须通过固定的合同条款尽量降低这类风险，即规定因监管机构和公共主管当局酌情做出的决定和调整而导致的所有不利影响，必须予以适当补偿，以便维持项目的回报率。

应明确规定项目的重新平衡流程。监管和政治风险示例如下：许可的撤销、环境和社会义务的变更、服务税费的调整。

宏观经济风险对基础设施项目的影响如下：GDP 增速、实际利率、通胀率变化以及汇率波动可能会影响基础设施的经济绩效，特别是其需求和财务情况。因此，对于因宏观经济不稳定造成的意外需求不足或汇率大幅贬值，可事先在合同中确立灵活应对措施。

相关可调节机制的示例如下：预先规定再融资基金、延长特许期或由公共担保基金或机构提供支持。

技术风险包括施工设计缺陷、成本超支、延期、质量缺陷、技术老化等。这些风险应由承包商和履约保证、完工保证等专门保险工具部分承担。

最后，不可抗力风险，如因自然灾害、战争、社会动乱引起的罕见而不可预测的风险可由保险公司部分承担，主要由政府担保承担。推荐使用公共担保组织和保险代理行，特别是在发展中经济体中，因为私营保险业无法充分消除上述多数风险。

金融工具的多样化和吸引其他资金来源。如上所述，技术风险的复杂性和风险的状况在项目生命周期的不同阶段有显著差异。因此，基础设施项目在不同阶段对权益、信贷和金融工具的需要也完全不同。

在规划和筹备阶段，项目最需要股权出资。这一阶段，股权出资人必须具备高水平的专业技术。根据项目的商业性质及其感知回报率，前期的股权出资可由建筑公司提供。另外，感知风险较高的大型新建项目需要直接或间接的公共支持，或从预算中拨出项目筹备资金，或由发展融资机构提供项目筹备所需的基金。

在施工阶段，由于项目的技术复杂性，风险往往较高。详细施工设计的质量、承包商的经验和专业知识、进行股权出资的众多出资人——通常与特殊目的公司有关以及发展融资机构提供的财务支持，都是关键因素。

当风险发生时，出资人（SPC）应有足够的动因按照股权支持协议（ESAs）中的事先规定提供额外股权，根据风险的性质，保险公司和公共担保机构必须履行其合同义务。发展融资机构也应协助再融资或延长宽限期，以确保施工的顺利完成。

一旦项目顺利进入运营阶段并产生正向现金流，风险就大大降低了，从而能够吸引到其他资金来源。在这一阶段中，部分银行贷款可转变为证券或长期债权。

如果此类资产享有其他去风险化计划（如，共享债权人担保）和/或优惠税收待遇，就可吸引养老基金、保险公司、主权基金、私募股权基金等可提供长期承诺的机构投资者持有此类基础设施债券。从发展金融机构的角度来看，若这些机构能与债券持有人互换信贷，就能腾出这些其他资源用于支持新的项目。

发展融资机构还应通过资助基础设施所有者和经营者的研发活动，支持这些技术和与基础设施相关应用的开发。发展融资机构应通过与之相关的种子基金和风险投资基金，对初创公司和中小型科技公司进行资助，以便开发出专门用于基础设施智能数字化的软件和系统。

最后，必须强调发展融资机构在资助国家网络系统持续扩展中发挥的关键作用，使得网络服务更快、更便宜、更可靠，这也是新信息技术安全而高效地应用于基础设施系统的一个必要条件。

促进基础设施领域的大量可持续投资是推动长期发展的一个关键因素，有助于提高整体经济的生产力和显著改善社会生活质量。积极推动基础设施的智能数字化发展是发展融资机构肩负的一项日益相关的新使命。

在成员国和本国的支持下，多边开发银行和国家开发银行（MDBs 和 NDBs）成为了支持长期基础设施项目、将高风险投资引入创新密集型行业以及促进贫困地区或与环境可持续性有关的社会需要投资的主要机构，在短期内，这些项目和投资的回报率可能较低。

七、前进的道路：共同合作并构建混合型平台

新多边开发银行需要进行互补，以便加快完成其工作，优化工作结果。同样，新多边开发银行还需积极吸引私人资本的参与，促进私人资本的发展，从而为成员国和人民创造价值和正向溢出。对此，本报告建议发展导向型机构之间构建混合平台。此项倡议由新多边开发银行主导，还应包括机构合作伙伴，如大学、智

库、私募或公共基金以及著名的投资银行。应优先考虑发展中国家的机构和参与者。

其后，应实施一系列跟进举措，例如：

1. 通过旨在分享知识和数据、分摊风险和认可其他机构决定的激励机制，如友谊设施，加强合作；

2. 规定并实施针对南南合作等关键性共同议程和特定行业的协调方法；

3. 项目筹备基金或担保计划项目等联合资助倡议应提供成功案例；

4. 在新多边开发银行间设立正式的评价和风险缓解机制，加强拟建项目评估和投资组合管理，促进联合技术援助；

5. 针对由发展中国家的发展融资机构协调的特定项目或任务，开展短期（至多1年）人员交流：包括来自国家开发银行和多边开发银行的人员；来自大学和智库的专家；以及来自投资银行、私募基金和公共基金的人员参与。

6. 召开小型联合年会，聚集选定的平台参与者，探讨、调整正在实施的联合议程和全球问题并确定前进的道路；

7. 每两年组织一次政策导向型技术培训课程和研讨会，邀请多边开发银行官员、学者、成员国官员以及从业者参加，以便交流专业知识、培养关键技能；

为了建立适用于新多边开发银行共同合作的可持续发展模式，可采取进一步举措，比如：

8. 协助并陪伴成员国（MCs）提高其获取其他资金来源的能力；

9. 建立联合技术援助，采纳某一成员国的最佳实践并推广到其他成员国（“逆向创新或逆向联动”）；

10. 开发可持续的跨境投资并制定有效的激励措施，如区域一体化、经济走廊和贸易自由化；

11. 达到风险峰值后，重新考虑新多边开发银行在发展项目中的作用：“去风险化项目”，即只要关键完工风险得以缓解，私人投资者就能取代多边开发银行；

12. 识别和调动来自慈善基金、主权基金、私营部门等其他非传统来源的资源，以建立共同投资工具、众筹、加密货币和跨境投资基金（少数股份制基金）。经济走廊模式（中巴经济走廊）可在非洲推广——但须尊重非洲国家的特色。

13. 通过缓解货币错配，降低基础设施项目的风险。吸引私人资本，优化货币风险保险、对冲和担保等金融工具的组合，同时出借本币并促进基础设施债券的发行；

14. 通过公共和私人银行代理网络，扩大间接经营活动，使其金融产品具备毛细性并刺激新的资本调动；

15. 促进国家政策性银行、多边开发银行和私营企业之间的三方合作业务，推动小型基础设施项目的发展，通过向发展中国家转让技术和专业知识，改善贫困社区的环境卫生状况、提高农业生产率、促进创新驱动项目发展；

16. 通过认购初次发行股，为基础设施相关发行人提供融资；⁷

17. 通过由多边开发银行充当协调人的政府与社会资本合作模式（PPP），支持非石油部门提高生产率；⁸

18. 促进弱势国家中的性别平等并对其提供补充支持。由非洲开发银行设计和运作的过渡支持基金（TSF）以及国家适应力和脆弱性评估是一种可供考虑的模式；

⁷ 参见 AIIB, 2019 年:

<https://www.aiib.org/en/projects/approved/2018/download/regional/Asia-ESG-Enhanced-Credit-Managed-Portfolio.pdf>

⁸ 参见伊斯兰开发银行年报, 2017 年:

[https://thatswhy.isdb.org/irj/go/km/docs/documents/IDBDevelopments/Internet/English/IDB/CM/Publications/Annual Reports/43/Annual%20Report%202017.pdf](https://thatswhy.isdb.org/irj/go/km/docs/documents/IDBDevelopments/Internet/English/IDB/CM/Publications/Annual%20Reports/43/Annual%20Report%202017.pdf)

19. 促进产业优化和产业梯度从发达地区向欠发达地区转移。中国江苏、安徽、湖北、广东深圳等地由中国国家开发银行（CDB）支持的区域集群发展是一种可供考虑的潜能模式。

在推动以多元、开放和相互尊重的方式进行有关发展融资和开发性机构的重要辩论方面，本报告是一个起点，而非终点，为发达国家和发展中国家的其他机构和专家所撰写的大量优秀资料和著作提供了新的理论成果。

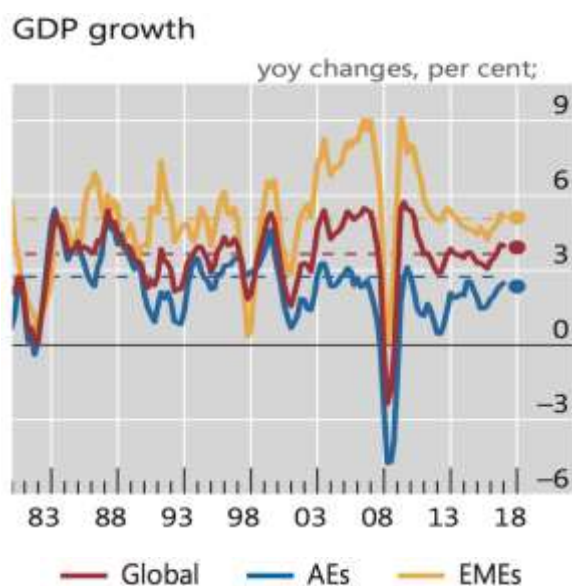
Contents

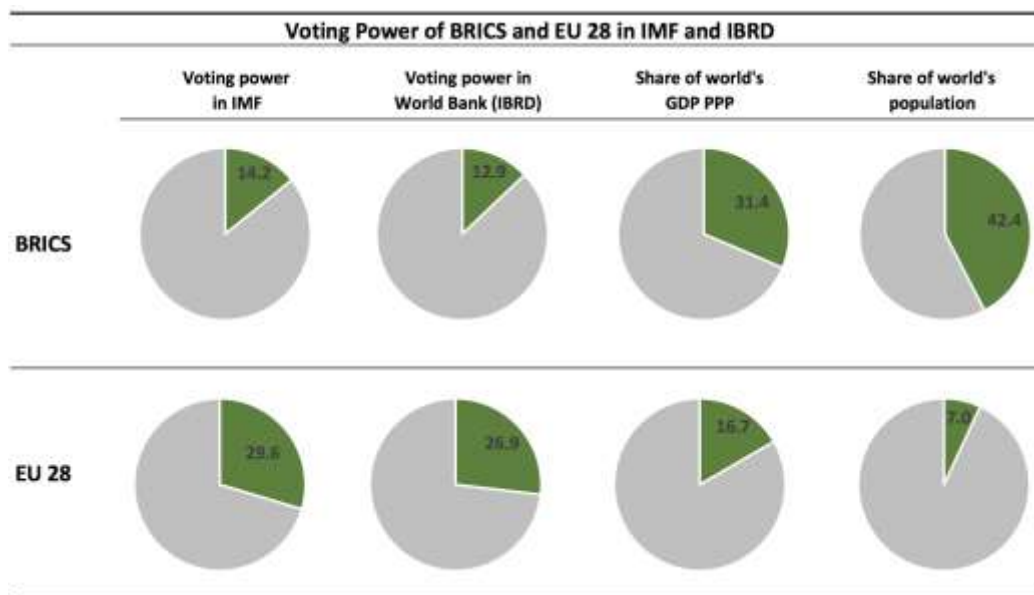
1. Remarks on the 2008 financial crisis.....	3
2. Remarks on the role and the challenges for new MDBs	5
3. Remarks on infrastructure gap and limitations of the private and institutional investors.....	8
4. Remarks on successful catching-up models.....	10
5. Remarks towards Integrated, Connected and Smart Infrastructures	11
6. A pro-active blueprint for Development Finance Institutions	12
7. The way forward: joint cooperation and creation of a hybrid platform.....	16

The aftermath of the 2008 financial crisis unleashed a large capital inflow to the Asia region and other Emerging Markets and Developing Countries (EMDCs), contributing to a boom in asset prices, central banks' balance sheet expansion, and increasing public and corporate debt stock. A situation shared by developed and developing economies alike.

Therefore, in order to rein into financial instability, to improve debt management and to mitigate systemic risks, important agendas and initiatives have been spearheaded by traditional Development Finance Institutions such as the International Monetary Fund (IMF), World Bank (IBRD), Bank of International Settlements (BIS) and the United Nations Conference on Trade and Development (UNCTAD).

Notwithstanding, the BRICS countries and other EMDCs are crucial stakeholders to push forward this agenda: they have 42.4% of the world's population and accounted for 31,4% of the world's GDP growth in 2017; in combination with other EMDCs, they contributed on average to 72,3% (2010-2017) of global growth. However, they still are underrepresented in most of the traditional multilateral financial institutions. The data below shows that these countries have only 14.2% of the total voting power at the IMF and 12.9% at the IBRD, while European Union (EU) for instance, accounting for only 16.7% of the world's GDP and 7% of the world's population, has 29,6% at the IMF and 26.9% at the IBRD.





Source: voting power from IMF and IBRD's websites. GDP and population data from IMF's WEO database, updated as of Oct-2017, *apud* Suchodolski and Demeulemeester (2018)

It is pivotal that Multilateral Development Banks driven by developing countries work together in order to help to reshape the traditional standards and guidelines for financial stability and for development finance. By providing new approaches with lenders, offering new financial instruments and supporting sustainable projects, MDB's can demonstrate that national sovereignty and sustainability (low-carbon and financial) are paramount.

Besides offering technical know-how for project finance and risk mitigation, MDB's can also complement traditional funding sources and facilitate equity growth, alleviating the fiscal pressure on national governments given the large investment required for infrastructure projects which in turn are capable to promote social welfare, higher assets return, and help achievement of sustainable development goals (SDGs).

As an example, total infrastructure investment as a share of global GDP must increase from current 3.7% to 5.5% per year over the coming 20 years; furthermore, it has been estimated the need for additional investments in developing economies at US\$ 1 trillion per year to address their needs in: logistics, digital connectivity, urban and economic infrastructures. Developed economies also need to invest more: around US\$ 700 billion per year to face the development of new low-carbon energy sources, in order to meet the 2030 Agenda commitments.

1. Remarks on the 2008 financial crisis

The year of 2018 marks the tenth anniversary of the 2008 financial crisis. A crisis that according to the report prepared by the Financial Crisis Inquiry Commission¹ was a result of years of over-deregulation and scale-up of risky shadow banking operations; failures of corporate governance and risk management with excessive leverage-ratio and dependence on short-term funding; lack of awareness of risks and interconnections in the financial market by the regulator; systemic breakdown in accountability by major financial institutions; failure of credit rating agencies; low standard of mortgage-lending and securitization pipeline; indiscriminate diffusion of over-the-counter derivatives and synthetic collateralized debt obligation, among others.

In order to mitigate the consequences and avoid the worst scenario, a set of four major policies were taken across the globe: 1) the rescue of the financial institutions; 2) the adoption of countercyclical innovations; 3) the uphold of the world trade; 4) new guidelines addressed to improve the financial stability and mitigate financial risks. **These four policies thrived and proven to be effective thanks to a coordinated effort driven by G20 countries and their institutions that worked together to implement them thoroughly.**

It is worth mentioning that when the 2008 crisis triggered, officials from traditional international financial institutions such as the World Bank and the International Monetary Fund carried out an internal debate to gauge its impacts and prepare follow-up policies. Their initial assessment pointed out that the crisis consequences would last up to 4 years since the data of that time indicated that financial crisis effects usually take 3 to 7 quarters for cooling off, whereas in the years of recovering an additional GDP growth of 1-2% would be expected to rebuild the economic damage, according to Professor Justin Lin Yifu.

In the United States, for instance, which had its financial system as the cradle of the 2008 crisis, the estimated GDP growth - needed to ensure its recovery - should be 4 to 5 percent annually, a rate that has not been met. Indeed, after the Second World War the United States used to have an average of 3%-3.5% of annual growth, however its reached 2.2% in 2017, 2.9% in 2018 and is expected to slow to 2.5% in 2019, according to Goldman Sachs Research². The IMF also points out that within the next decade the United States GDP growth may drop further. The tenth anniversary of the 2008 crisis shows therefore that its epicenter, that is also the most powerful and advanced economy worldwide - has not fully recovered, an outlook also shared by other developed economies such as the Eurozone and Japan.

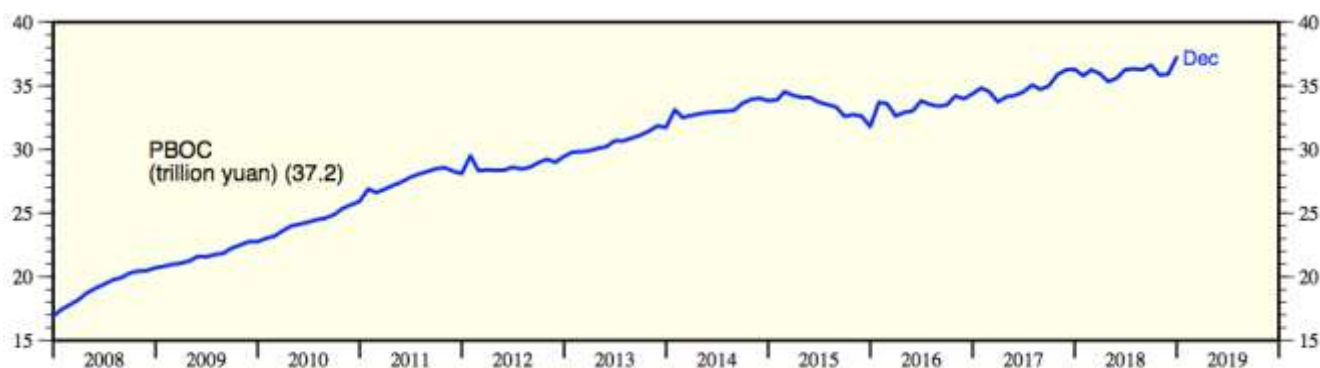
¹For more information see: <https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>

²See Goldman Sachs, 2018: <https://bit.ly/2SxUacm>

It should also be noted that when a country faces a crisis it is a strong evidence of a serious structural problem. Hence, to prevent its worsening or the unleash of a new crisis, a set of structural reforms need to be addressed. In general, structural reforms will enhance economy in the long-term and mitigate systemic risks, but during the time countries are implementing such reforms the economy turns into contraction mode, and since the outlook after the crisis is of low economic growth and of high unemployment rate, it gets difficult - and unpopular - for governments to adopt structural reforms. Actually, high-income countries so far have avoided these reforms, and instead they have been using taxpayers' money to keep their economy flowing, mainly by using their Central Banks - and debt - as levers to mitigate risk and uphold the economy.

Other financial crises have shown that not only overleveraged governments are exposed to debt crisis risk, but also the corporate sector and its currency and maturity mismatches, as well as fundamental imbalances in stock market or unsustainable development can prompt shocks, panics and crisis³. In the midst of the quantitative easing (QE) low interest rates bonds have replaced high interest rates ones, what have backed governments to reduce their fiscal burden and roll over their debt, mainly in advanced economies. However, the BIS estimates the total governments liabilities rose to USD 60 trillion in high income countries at the end of 2018, from USD 33 trillion prior at the end of 2007⁴.

In case of a tightening in the QE, the cost of borrowing will rise pressuring indebted governments and corporate sector, thereafter increasing the risk of defaults. Both governments and private sector in developed and emerging countries still have adjusted and improvement to perform, moving their balance sheet away from an explosive and too risky path. Development Financial Institutions definitely are partners to overcome this challenge, mobilizing capital and know-how to help finance the bulk of investments needed.

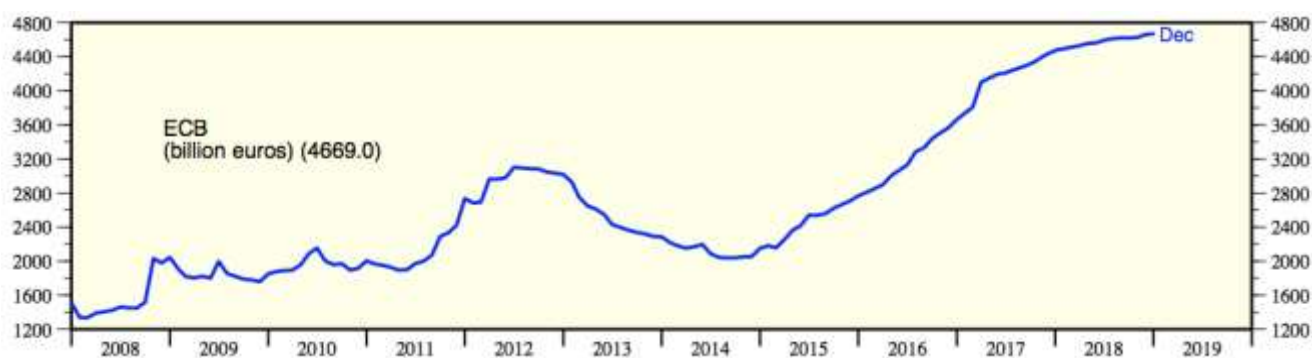
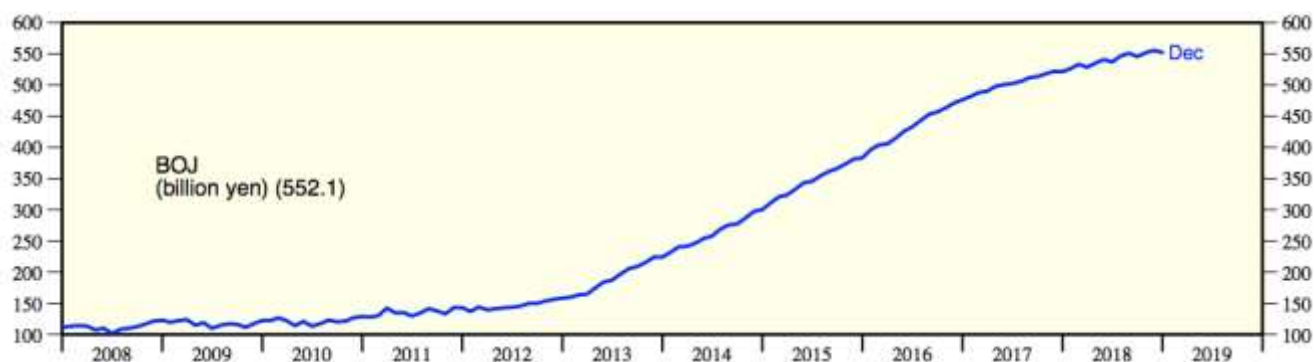


³See Jaime Caruana, 2017: <https://www.bis.org/speeches/sp170206.htm>

⁴ See Credit Suisse, 2019: <https://www.credit-suisse.com/uk/en/private-banking/learn-more-about-market-trends/assessing-global-debt.html>

Total Assets of Major Central Banks (2008-2018)⁵

One of the main political highlights that emerged from the 2008 financial crisis has been the role that emerging countries, such as the BRICS (Brazil, Russia, India, China and South Africa), have played as global stage actors, either by mitigating risks through institutional and governance enhancements, or performing countercyclical and innovative policies, or by backing both their domestic economy and the global trade. In this sense, infrastructure, renewables, urbanization and tech-oriented sectors have had a pivotal role, and still have enormous room to igniting growth in both in developed and emerging economies.



2. Remarks on the role and the challenges for new MDBs

Firstly, it is necessary to debate new questions in order to strengthen new consensus, such as: How can MDB's contribute to a more prosperous global economy? And how to achieve in 2030 the SDGs launched by the United Nations in 2015?

⁵ See: "Global Economic Briefing: Central Bank Balance Sheets, 2018".

To do so, this report recommends a clarification of two different categories of MDBs. The first one, classical MDBs such as the World Bank, which were created and are still driven mainly by developed economies, and a second generation, established and driven mainly by developing countries, such as the NDB and the AIIB. The first group has as their core guidance the experience derived from high-income countries to guide the policy making in the developing world. The second group, has as its core guidelines the experiences and ideas and observation from the developing world, and are keener to use such practical knowledge to help other developing countries reach their policy goals.

The establishment of new MDBs such as the New Development Bank (NDB) and the Asian Infrastructure Investment Bank (AIIB) also represent the rising power of the BRICS countries, mainly post-2008 financial crisis. Their share of the total global growth reached 31,9% in 2017, and combined with other EMDCs they have contributed to 72,3% of the total global growth since 2010, while the economic outlook for developed economies, especially the European Union, is sluggish and hasn't yet rebounded. Furthermore, it is also an expression of a new international dynamic that now is less concentrate, more plural and integrated, and one that has encouraged pushing forward new agendas such as reforming the United Nations governance, improve the global financial architecture and stability, and the agenda for sustainable development either for low-carbon and for financial sustainability.

New MDBs understand easily that the validity of certain prescriptions depends on pre-conditions, and those are different between high-income and developing countries, whereas classical institutions have failed to support a real catching-up by developing countries. Instead of good intention or well-designed mandates, the most important metric should be the real evidence, and data has shown classical MDBs results to reduce the gap between the developed and developing world are disappointing in this regard.

To reach new results, new ideas must be designed, inspiring new paradigms and policies. In addition to that, the funds and technical support that MDBs and other International Financing institutions can provide are essential, contributing to developing countries to prepare fundable projects, leveraging successful operations and upholding win-win relationships, what will prevent these countries from facing economic stagnation and another lost decade, as it was the case of Japan (失われた二十年) in the past, and Latin American Countries, notably Argentina, Brazil and Mexico (La Década Perdida).

New MDBs also are mission-oriented since its creation to push the Sustainable Development Goals (SDGs) forward. And even though their share over the world GDP increased from 55 to 60%, to fully complete this agenda, there is still a long way ahead, that will require relentless work and joint-initiatives. And for that, infrastructure and industrialization are crucial sectors. To reach that, new MDBs can rely on institutional innovation to mobilize resources, combine successful experiences from developed and developing countries, in order to maximize new initiatives and new ideas successfully implemented at

the national level by their Member Countries (MCs). This way, MDBs can support developing countries to catch-up and also pave the way to achieve the SDGs.

When this day come, however, maybe the MDBs will be no longer necessary.

This report stresses that there is an enormous room to stimulate joint actions as well as cross border initiatives among MDBs and other strategic partners. Initiatives such as a co-investment platforms among MDBs in Asia as well as in other emerging regions can be jointly funded, along with friendship facilities to develop project preparation, replication of best practices, risk and technical assistance.

Member Countries of MDBs are facing economic, demographic and climate change challenges, of which worth special attention: high population pressure and growth: youth dilemma and job creation; rural exodus and urban planning challenge.

Although many developing countries present high birthrate, they have faced problems such as illegal migration, refugees and civil wars. As a consequence, to create infrastructure in these countries the required price is higher and involves other issues that need to be understood and addressed. In some of these countries that have been receiving waves of refugees there was a surge in their population around 5%. How to address this infrastructure demand and fiscal burden, such as new schools, more hospitals, but also sanitation, water treatment and so on? Additionally, countries in the Middle East like Saudi Arabia have 70% of its population below 30 years old. The challenge is how to provide jobs for this youth population in the years to come? And a solid private sector will be fundamental.

Climate change also shows already a negative impact that requires adaptation and mitigation. It requires large amount of CAPEX, which will need to be provided mainly by governments.

Thereafter, MDBs need to address these global challenges together with MCs. In the backdrop of changes in the US monetary policy and trade tensions, we have seen rising costs of financing or to obtain funds, creating extra burden for developing countries. It has also provoked currency instability, capital outflows from developing countries to developed economies (reducing FX reserves) and causing devaluation across many countries, leading to importation inflation.

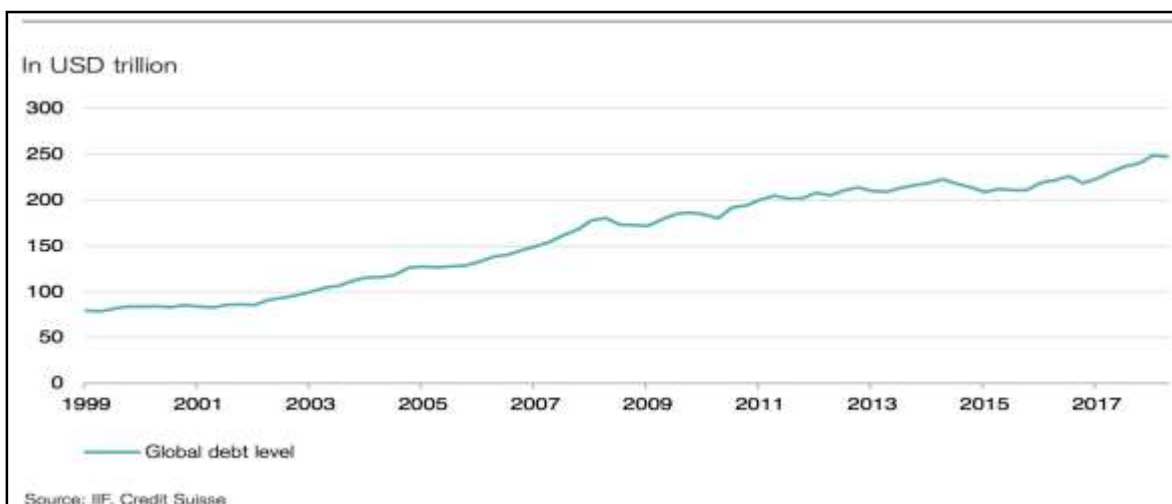
Oil prices also pose a big uncertainty, marked by a scenario of geopolitical instabilities and low investment in oil production. Moreover, they are countries that use oil as a fuel of their infrastructure sector, such as Bangladesh that has thermal plants. Rising oil prices will increase the cost of their infrastructure.

Upward trend asset price is also a problem that need to be addressed, such as housing, stock market, where many contexts seem a pre-bubble situation. The fiscal burden to MCs to tackle all these issues individually is not an optimal policy. Development institutions, either traditional or new multilateral development banks are able to alleviate this fiscal pressure, besides strengthening and speeding-up the policies outcomes in a much more efficient way.

3. Remarks on infrastructure gap and limitations of the private and institutional investors

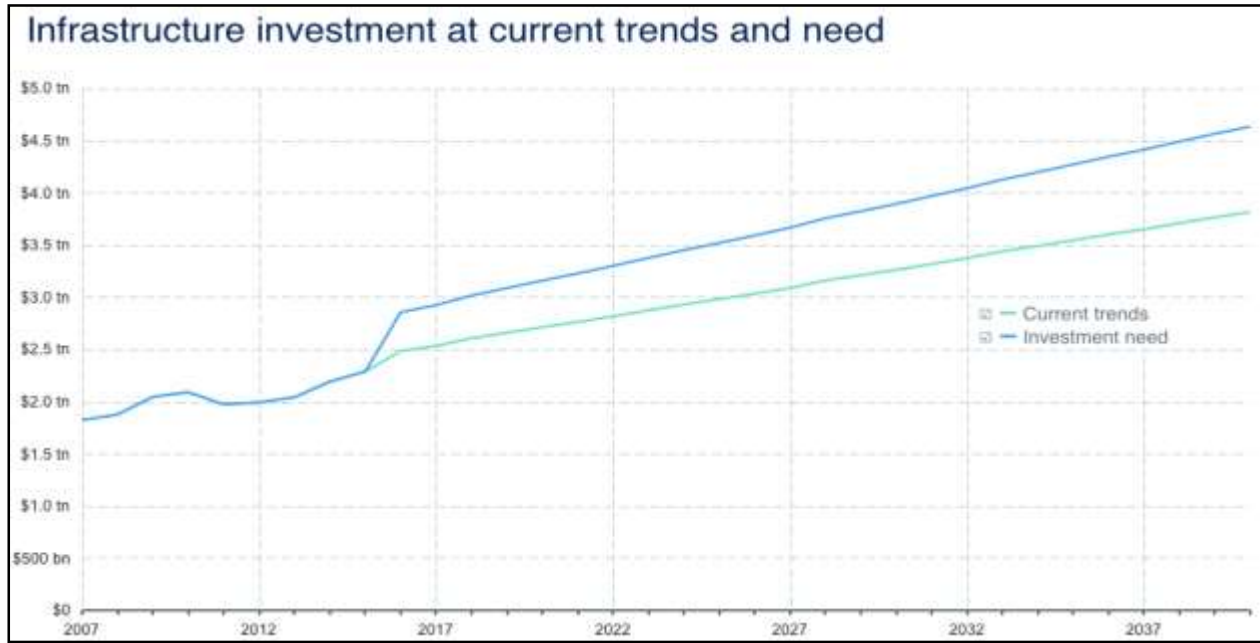
Studies from various sources (G20, McKinsey, BIS) estimate that the share of total infrastructure investment in global GDP should increase from approximately 3.6% to 5.5% in the coming 20 years. Most of these additional investment efforts are needed in emerging economies to address their infrastructure bottlenecks, growing urbanization and the challenges of enhancing trade integration and digital connectivity. The incremental investment needs in developing economies is estimated by the Global Infrastructure Outlook, a G20 initiative, to be over US\$1 trillion a year. Developed economies will also need to invest an equivalent additional amount to renew their large infrastructure and tackle the development of low-carbon energy sources in order to meet the 2030 commitments to the sustainable development goals. Until 2040, the Global Infrastructure Outlook estimates US\$94 trillion of investments need, of which US\$79 trillion shall be invested according to the current trends, an investment gap, thereafter, of US\$15 trillion.

Furthermore, since the 2008 crisis the pace of debt is growing globally and accelerated, and according to the Institute of International Finance (IIF) it has reached almost USD 250 trillion or almost 300% of the global GDP. Thus, given the limitations for massive additional governmental indebtedness in almost every country and considering also the stricter banking regulation under Basel III and IV standards, which restricts commercial banks capabilities to expand long term credit, some innovative approaches will be necessary in order to mobilize complementary sources of finance to infrastructure.



The Development Finance Institutions (DFIs) like the Multilateral and National Development Banks (MDBs and NDBs) and the export credit agencies (ECAs) should maintain their crucial role as the major suppliers of infrastructure financing. Given the support and guarantees provided by their shareholder member-states or by the respective national states, these institutions are able to hold satisfactory capital-base ratios and to obtain cheaper and much longer-maturity funding. Nevertheless, the DFIs could enlarge their firing power if they help develop new market instruments and to tap additional sources of long-term funding for infrastructure financing.

Institutional investors like pension funds, insurance corporations and sovereign wealth funds are very large holders of long term liabilities and, theoretically, could invest much higher shares of their portfolios in long term assets. Data have shown an estimated global portfolio of such investors at around US\$90 trillion. However, the debt or equity portfolio allocations by these institutions into infrastructure projects is still very low, hence with great potential to growth.



Source: Global Infrastructure Outlook, 2019.

4. Remarks on successful catching-up models

Every country in the world, including the current rich countries, were poor economies only some three centuries ago. Furthermore, they shared a common feature: they all were agricultural countries. In fact, the history has shown that to uphold one country goal to become a high-income nation, industrialization is the most effective strategy as well as the strongest lever to reach a higher per capita GDP given its intrinsic higher labor unit productivity. Whereas, in order to have this industrialization it is necessary to foster infrastructures initiatives that in turn underscores the necessary structure to underpin the industrialization process. Moreover, infrastructure helps to boost the domestic market and creates the platform to back the export-led sector in competitive terms.

Even considering the Sustainable Development Goals and all the targets that it encompasses, job creation stands as the most important one since it allows people to earn their salaries, increasing the aggregate demand and stimulating the domestic market by enlarging the available share of wages addressed to consumption of goods, services, and food. Besides of contributing to tackle nutrition and poverty issues, a larger aggregate demand through real wage increasing supports the economy to be more dynamic and stimulates entrepreneurs to invest and innovate. In this sense, the key feature to unleash job creation is industrialization and infrastructure.

However, one may wrongly consider that it should be very simple for a nation to industrialize. Nonetheless, after World War II, from over 200 nations, only a few were able to become high-income economies. South Korea is an example of successful catching-up. Nowadays, countries like China pave the way in this very like direction from low-income to high-income country. Furthermore, the countries that have not made their catching-up process is not due they did not want to have that, yet it is mainly because they had the wrong ideas and/or implementation strategies.

The year of 2018 also marks the 40th anniversary of the Chinese opening-up policy, where China started as a poor and agrarian country and became one of the most dynamic hubs worldwide. What has made the difference for China? One might say transition; and it is a common phenomenon, however, all the socialist countries in the past were in transition, whereas most of them had not stability as China have had. Most of them faced economy collapse, economic stagnation, or was hit by a financial crisis. Indeed, China, in its turn, have been implemented its own new structural financial economics, based on China's specific economic development conditions, institutional and technological arrangements, yet still facing economic challenges.

The few successful economies also share other common points: first of all, they were and still being very pragmatic. They chose industrialization and begun their development strategy from a low-level of industry capacity, and had to develop it step by step, with great social efforts. Second, although good governance, good institutions and good environment are widely considered as the factors that decisively determine an outcome, it is worth mentioning that those successful economies started their industrialization with weak institutions, very poor governance, and huge infrastructure gaps. **Pragmatism, in its turn, was and still being an effective answer: what one can do with what one has instead of what one wants to have; whereas what one wants to reach may be used as its policy guidance.** And third, successful catching-up countries have evolved into market-economy, however all of them have had an active and strong development-oriented government that have performed as a balance in the challenges for industrialization,

5. Remarks towards Integrated, Connected and Smart Infrastructures

The current wave of rapid digitalization of economic and social systems and activities, in the realm of the Internet-of-Things (IoT), offers an extraordinary opportunity to turn all infrastructures more efficient. The potential of obtaining productivity gains and cost reductions in infrastructural systems is highly significant and cannot be overlooked.

For example, digitalized smart grids can make electricity distribution much more efficient and, as well as water and sewage systems, further contributing to make infrastructure more sustainable. Moreover,

the efficiency of urban traffic flows, urban LED-lighting systems, commercial transportation and logistics related to retail and wholesale activities, can attain much higher levels of optimization in the near future, thanks to the diffusion of connected and smart digital-platforms.

New computing paradigms already have enabled an exponential increase in efficiency and cost reduction, unleashing a new momentum for robotics, automation, big-data analytics and distributed ledger technology (DLT), and Information and communications technology (ICT) addressed for a new infrastructure (3.0) and development finance instruments. As a result, smart-contracts, driverless vehicles, ships, cranes, optimized customs clearance and logistics, mitigations of risks and, paperwork cutting will take part as the new doing business⁶.

It is worth mentioning initiatives that by using these new technologies aim to improve transparency, traceability and efficiency of project transactions and in the use of public resources the finance development, such as the cooperation between the Brazilian National Bank (BNDES) and the German government-owned development Bank, KfW, to manage the Amazon Fund, in Brazil, with ongoing 96 projects supported in the portfolio⁷.

Thus, it is inconceivable, from now onwards, that the planning and design of new infrastructures neglect the application of advanced information technologies through the spread of the Internet-of-things. In this regard, Development Finance Institutions (DFIs) should play a leading role in inducing project designers and engineering companies to apply the new generations of information and communications technologies into the conception of the infrastructure projects. To complement the investment bulk already mobilized by the private sector, DFIs also play a crucial role providing know-how and affordable capital to underserved areas so as to upgrade their infrastructure framework, boosting trade and development.

6. A pro-active blueprint for Development Finance Institutions

To enlarge the scale of investment in infrastructure, it is important departing from the recognition of the peculiarities of the infrastructure assets. To begin, infrastructure projects are generally highly capital intensive and carry very long maturities. The upfront need of capital and/or of finance is usually large since it takes a few years between the initial design, planning, engineering, construction, testing and ramp-up, before a project is completed and start to generate a positive free cash flow.

⁶For more, see: Asian Infrastructure Finance report, AIIB, 2019.

⁷See BNDES, 2018: <https://www.bndes.gov.br/wps/portal/site/home/imprensa/noticias/conteudo/tecnologia-blockchain-sera-objeto-de-cooperacao-entre-bndes-e-kfw>

The infrastructure projects also involve economic, social benefits, externalities and multiplier effects on rate of production, employment and competitiveness, which for its turn are not easily estimated. In addition, the structuring of such projects usually goes through complex procedures and encompass many actors and parties, such as construction contractors, sponsors, debt holders, insurance companies, O&M contractors, regulatory agencies, procurement authorities, users and financial institutions. This description *per se* suggests a high chance of information asymmetries and conflicting interests among stakeholders, besides to underline the need for coordination and harmonization.

Thereafter, envisioning to improve the attractiveness of the infrastructure projects and mitigate their risks, the Development Finance Institutions should help governments to:

A) Develop a sizable pipeline of mature and well-structured projects: the structuring of an infrastructure project is a complex endeavor that requires:

- a) The development of detailed technical specifications and engineering;
- b) Forecasting of demand;
- c) Reliable and consistent legal framework and related contracts;
- d) Definition of guarantees, insurances and incentives to assure the project completion and last but not least,
- e) The design of a suitable financial model and of the bidding procedures.

All these tasks are technical, demanding specialized expertise and may cost up to 5% to 8% of the total investment. In addition, the entire preparation and structuring of a large project is time-consuming, encompassing around 18 months. Hence, the development of a sizable pipeline of projects is a very relevant externality, bringing significant benefits for the economy as a whole. It is a precondition for achieving a sustained and predictable expansion of infrastructure.

Thus, deserve financial support by governments and by DFIs through the establishment of Project Preparation Funds or Facilities.

B) Pursue the mitigation of project risks and obtain bankability. In this sense, and given their longevity, infrastructure projects are subject to four main categories of risk:

- a) Regulatory and political;
- b) Macroeconomic and market risks;

c) Engineering & construction or technical risks;

d) Force majeure.

Each of these risks require specific mitigation measures and/or legal provisions.

The description of these risks, below, points out how infrastructure investments are particularly vulnerable to market failures and uncertainties. Because such risks are too big or too difficult to insure, the viability of infrastructure projects require substantial risk mitigation by public agencies and governmental policies.

Regulatory and political risks are difficult to foresee and must be minimized through solid contractual clauses establishing that all adverse impacts caused by discretionary decisions and changes made by regulators and by public authorities must be duly compensated such as to re-establish the project's rate of return.

The procedures for the process of re-equilibrating the project should be clearly stated. Examples of regulatory and political risks are: cancellations of permits, changes in environmental and social obligations, changes in service tariffs or taxes.

Macroeconomic risks may affect infrastructure projects in so far that changes in the GDP growth, real interest rates, inflation rates and fluctuations of the exchange rate may have impact on the economic performance of the infrastructure, particularly on the demand and financial conditions. Accordingly, flexibility can be contractually pre-established in cases of unexpected insufficiency of demand or sharp exchange-rate depreciation derived from macroeconomic instability.

Examples of such adjustable mechanisms are: pre-defined refinance facilities, the lengthening of the concession-periods or the support by a public guarantee fund or agency.

The **technical risks** comprise, among others, to shortcomings in the engineering, cost overruns, delays, quality deficits, technological obsolescence. These should be partially borne by the contractors and by specialized insurance instruments, like the performance and completion bonds.

Finally, **force majeure risks**, such as rare and unpredictable risks stemming from natural disasters, wars and social upheavals may be partially protected by insurance companies and mainly by governmental guarantees. The organization of a Public Guarantee and Insurance Agency is a recommendable option, particularly in developing economies, in so far many of the above-mentioned risks are not adequately neutralized by the private insurance industry.

Diversification of Financial Instruments and attraction of other sources of finance. As already pointed out above, the complexity of the technical tasks and the profile of risks vary significantly along the different stages of a project life cycle. Hence, the needs for equity, credit and financial instruments are thoroughly different along the distinct phases of an infrastructure project.

In the planning and preparation stage, a project mostly needs equity contributions. Within this phase, equity sponsors must gather a high level of technical expertise. Depending on the commercial nature of the project and on its perceived rate of return the upfront equity contribution may come from construction companies. Otherwise, large green-field projects carrying higher perceived risks require direct or indirect public support, either by budget allocations to project preparation funds or by project preparation revolving facilities sponsored by Development Finance Institutions.

In the construction phase the risks are usually high, due to the technical complexity of the projects. The quality of the detailed engineering, the experience and expertise of the contractors and the existence of a pool of sponsors - usually associated in a Special Purpose Company -, capable of disbursing equity contributions, are critical factors as well as the financial support by Development Finance Institutions-DFIs.

The sponsor-SPC should have adequate incentives to provide additional equity if risks materialize, through the pre-definition of equity support agreements-ESAs and, depending on the nature of the risks, the insurance companies and the public guarantee agencies must meet their contractual obligations. The DFIs should also collaborate to refinance or to extend grace periods in order to secure the completion of the construction.

Once the project successfully starts the operational phase by generating positive cash flows the risks diminishes substantially, allowing for the attraction of other sources of finance. In this stage bank loans could be partially securitized or substituted for by long-term bonds. **Institutional investors like pension funds, insurance companies, sovereign funds and even private equity funds with a longer-term commitment could be attracted to hold such infrastructure bonds if additional de-risking schemes (for example, sharing of creditors' guarantees) and/or a favorable tax treatment is granted to this class of asset.** From the point of view of the DFIs, the possibility of swap their credits to bondholders can free up these additional resources to support new projects.

The DFIs should also support the development of such technologies and related applications to infrastructure through the financing of R&D activities by infrastructure owners and operators. Startups and technology-based small and medium firms should be fostered, by seed and venture capital funds associated with the DFIs, so as to develop software and systems dedicated to the smart digitalization of infrastructures.

Finally, it is important to stress the crucial role of DFIs in financing the sustained expansion of the national internet systems, in order to achieve faster, cheaper and reliable services, which is a *sine qua non* condition for the safe and productive application of the new information technologies to the infrastructural systems.

The promotion of higher and sustainable investment in infrastructure is a key factor to boost long-term development, with increasing productivity gains to the economies as a whole and also with significant gains in the quality of life to our societies. The active promotion of the smart digitalization of the infrastructures is an increasingly relevant new mission to the Development Finance Institutions.

Backed by the member-states and by the national states, the Multilateral and National Development Banks (MDBs and NDBs) are key institutions to support long maturity infrastructure projects, induce riskier investments in innovation intensive sectors and foster socially needed investments in poorer areas or related to environmental sustainability, which may carry lower rates of return in the short term.

7. The way forward: joint cooperation and creation of a hybrid platform

development-oriented institutions. With the new MDBs spearheading the initiative it should engage institutional partners such as universities, think tanks, private or public funds as well as reputable investment banks. Priority shall be given for institutions and participants from developing countries.

Thereafter, a set of follow up initiatives shall be implemented, such as:

Enhance cooperation through incentive structures aiming at sharing knowledge, data, risk and recognizing other institutions' decisions, as an example of friendship facilities;

Define and initiate a coordinated approach towards a key and shared agenda, for instance, South-South cooperation, and a specific sector;

Successful cases should be encapsulated into joint-funded initiatives such as Project Preparation Facilities or Guarantee Schemes programs;

Set up a formal mechanism among new MDBs to perform evaluation and risk mitigation to enhance pipeline assessment and portfolio, boosting joint technical assistance;

Short-term exchange (up to one year) of people to specific projects or tasks coordinated by Development Finance Institutions from developing countries; among personnel from national and multilateral development banks; experts from universities and think tanks; from investment banks and public and private funds.

A joint and small scale annual meeting assembling together selected participants of the platform to discuss and adjust ongoing joint-agenda, global issues and to set the way forward;

A policy-oriented and technical training course and workshop, to be held every two years, involving officials from MDBs, academia, officials from MCs and practitioners aiming transferring of expertise, develop critical skills;

In order to build a sustainable model of joint-cooperation among new MDBs, further initiatives may be addressed, such as

Assist and accompany member countries (MC) to improve their capacity to access other sources of capital;

Set up joint technical assistance and encapsulate the best practice of one MC and to be implemented in another country (“Reverse Innovation or Reverse Linkage”);

Develop sustainable cross-border investments and create strong incentives, for instance, regional integration, economic corridor and trade liberalization;

Reconsider the role of new MDBs in development projects after peak risk has been reached: “de-risking projects” where private investors could take over from MDBs as long as the key completion risks have been mitigated;

Identify and mobilize resources from other non-conventional sources such as Philanthropist Funds, Sovereign Funds and Private Sector in general, for co-investment vehicle, crowd-funding, cryptocurrency, cross-border investments funds (they are only a few, joint-equity fund). Economic corridor model (China-Pakistan) could be replicated in Africa - respecting the countries characteristics.

De-risk infrastructure projects by mitigating currency-mismatch. Crowd-in private capital for an optimal combination of financial instruments such as currency risk insurance, hedge and guarantees, besides lending in local currency and boosting the issuance of infrastructure bonds;

Scale up indirect operations through a network of public and private banking agents, gaining capillarity for its financial products and stimulating new capital mobilization;

Foster triangular operations involving national policy banks, multilateral development banks and private companies to boost small-scale infrastructure projects, mainly addressed to sanitation in poor communities, agricultural productivity enhancements, and innovation-driven projects with transfer of technology and know-how to developing countries;

Provide financing to infrastructure-related issuers via subscriptions to primary issuances;⁸

Support productivity transformation in the non-oil sector through public–private partnership (PPP) having the MDBs as facilitators;⁹

Promote gender equality and also supplemental support in countries in fragile situations. The Transition Support Facility (TSF) and the Country Resilience and Fragility Assessment designed and operated by the African Development Banks is a model to be considered;

Promote industry optimization and industrial gradient transfer from more developed areas to less developed ones. The experience of regional clusters development in China in the provinces of Jiangsu, Anhui Hubei, Shenzhen and Guangdong, supported by the China Development Bank (CDB), is a potential model to be considered

Instead of being a point of arrival, this report aims to be a starting point to foster the important debate of development finance and development institutions in a plural, open and respectful manner, offering a new contribution to the wide range of outstanding materials and works carried out by other institutions and experts, either from developed or emerging countries.

⁸ See AIIB, 2019: https://www.aiib.org/en/projects/approved/2018/_download/regional/Asia-ESG-Enhanced-Credit-Managed-Portfolio.pdf

⁹See Islamic Development Bank annual report, 2017: https://thatswhy.isdb.org/irj/go/km/docs/documents/IDBDevelopments/Internet/English/IDB/CM/Publications/Annual_Reports/43/Annual%20Report%202017.pdf