*Financing India's Aspirations**

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Namaskar! Good morning,

I am honoured to be here today. This initiative by the CII – the Summit on Financing 3.0 – is perhaps the first of its kind and assumes timely significance in positioning itself as a beacon of light illuminating India's leap towards its future. At the outset, therefore, I would like to express my deep appreciation of CII's role in shaping India's industrial and business landscape since 1895 as arguably the most visible business association in the country today. It is only befitting that I pay tribute to the CII's extraordinary contributions by dwelling on our ambitions as a nation and the role of finance in actualising them.

II. An Aspirational Vision of India

There is a palpable pulsation in the mood of the nation. It is widely believed that this is India's century. A window of opportunity has opened up for striking out on a path that secures for every Indian the best living standards in the world. In the tradition of classical economics, it is a productive workforce that is the true source of value creation; capital is only an organising factor, boosting the productivity of labour and creating conditions for its growth. In that classical sense of the supply side of the economy, every sixth working person in the world is an Indian benefiting from a population that is the youngest in the world. The United Nations projects India's working age population to grow at 9.7 million per annum.[1] This cohort is expected to peak at 68.9 per cent of the total population by the 2030s[2].

On the demand side, India will skill this rising workforce at a rapid pace, given that we are already producing the largest number of STEM[3] graduates in the world – over 20 lakh every year, 43 per cent of whom are women[4]. India is also at the forefront of the digital revolution, among the world's leaders in information and communication technology usage and in start-up ecosystems. Projections suggest that artificial intelligence (AI) could contribute around US$ 1 trillion to the Indian economy by 2035[5]. As the ambition to become a global manufacturing hub and an export powerhouse materialises, the employability of the working age population will go up and India will experience rising incomes and prosperity. In the International Monetary Fund (IMF), economists have showed that reaping the demographic dividend could add about 2 percentage points per annum to India's per capita GDP growth over the next two decades.[6] In fact, recent research confirms the linkages between demographic dividends, digital innovation and economic growth[7]. Sustained by higher saving and investment rates associated with the rise of India's working age ratio, it will become possible to traverse between the GDP levels of today and 2047, as recently envisioned by Niti Aayog[8] and break out into per capita income levels associated with an advanced economy. From a time-varying perspective, a burst of speed is required for just about a decade; thereafter, sheer momentum will propel India forward even at lower growth rates. On the way, we will need to build up world class physical infrastructure and a conducive environment for unleashing innovation energies while

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1 Government of India, Economic Survey, 2018-19, Volume 1, Chapter 7.

2 Ernst and Young, 2023, India@100: Reaping the Demographic Dividend, April 11.

3 Science, technology, engineering, and mathematics (STEM).

4 Government of India, Interim Union Budget, 2024-25.

5 Ministry of External Affairs, 2020, India Launches Hub to Drive AI Innovation in BFSI Sector.

6 Aiyar, S. and Mody, A., 2011, The Demographic Dividend: Evidence from the Indian States, *IMF Working Paper* WP/11/38.

7 Zaman, K. A., U. and Sarkar, T., 2021, Demographic Dividend, Digital Innovation, and Economic Growth: Bangladesh Experience, *Asian Development Bank Institute Working Paper* 1237.

8 From today's GDP of US$ 3.36 trillion to US$ 30 trillion economy by 2047 with a per capita income of US$ 18,000 per annum from today's US$ 2,392 per annum (Niti Aayog, Vision for Viksit Bharat @ 2047-An Approach Paper, August 7, 2024).

moving towards being a greener, cleaner and healthier nation. India will also contribute to reshaping the world order to achieve an equitable, inclusive and sustainable future for humanity.

III. Finance and Growth Revisited

Key to the fulfilment of this vision of 'India Tomorrow' is the role of finance. An animated debate has coursed through the years on the relationship between growth and finance. Economists have argued that it follows either a supply leading or a demand following sequence. In the former premise, financial sector development precedes economic development. For instance, financial depth or the size of the financial sector relative to a country's economic size is found to be a strong predictor of subsequent economic growth, physical capital accumulation and improvements in economic efficiency[9]. In the latter proposition, it is held that the economy should develop and then the financial sector follows. Also, there is a recognition that this relationship may not be linear across countries and periods. At relatively low levels of development, this mutually reinforcing sequence may be transformative, but may taper off at higher levels of development[10]. Advancements in endogenous growth theory support both hypotheses, emphasising the role of finance and financial intermediaries in facilitating investments in innovation and education, lowering transaction costs and managing risks, thereby accelerating the growth process.[11]

The reality is that both strands intertwine and mesh in a manner that they are indistinguishable. While a well-functioning financial sector is a precondition for the efficient allocation of resources and the exploitation of an economy's growth potential, it is also axiomatic that the demand for financial services depends upon growth and the formalisation of various sectors of the economy. On the flip side, business and financial cycles feed, reinforce and amplify each other. There are also leads and lags. In early August, we saw a bloodbath in financial markets worldwide – reminiscent of Black Monday of 1987 – when incoming data were read as portending imminent recession, triggering a widespread sell-off and a global unwinding of carry trade. Analogously, the global inflation surge in the wake of the war in Ukraine provoked a synchronised and aggressive tightening of monetary policy and financial conditions, resulting in bank failures and deposit runs in some jurisdictions in March 2023.

IV. Situating Finance in National Accounting

In the circular flow of income and expenditure that describes the working of an economy, transactions in goods, services, compensations and taxes are matched by flows of saving and investment, which represent inter-sectoral transfers of lendable resources. In India, the household sector typically generates surplus saving relative to its investment which it lends to other sectors. Recently, net financial saving of households has almost halved from its level in 2020-21 due to behavioural changes underway in the form of unwinding of prudential savings accumulated during the pandemic as well as shifts from financial assets to physical assets such as housing. Going forward, boosted by rising incomes, households will likely build back their financial assets – 15 per cent of GDP was observed during the early 2000s up to the global financial crisis. This process has already begun – households' financial assets have increased from 10.6 per cent of GDP during 2011-17 to 11.5 per cent during 2017-23 (excluding the pandemic year). Their physical savings have also risen in the post-pandemic years to over 12 per cent of GDP and could rise further – they had reached 16 per cent of GDP in 2010-11. Accordingly, households will remain the top net lenders to the rest of the economy in the coming

[9] King, R.G. and Levine, R. (1993). Finance and Growth: Schumpeter Might be Right. *The Quarterly Journal of Economics 108*(3), 717-737; Levine, R. and Zervos, S. (1998). Stock Markets, Banks, and Economic Growth. *The American Economic Review 88*(3), 537-558.

[10] Huang, H. and Lin, S. (2009). Non-linear Finance–Growth Nexus. *The Economics of Transition 17*(3), 439-466.

[11] Levine, R., (2004). Finance and Growth: Theory and Evidence, *NBER Working Paper No. 10766;* Romer, P.M., (1990). Endogenous Technological Change, *Journal of political Economy, 98*(5, Part 2), S71-S102.

decades. The private corporate sector has drastically reduced its net borrowings from the rest of the economy[12], reflecting a combination of rising internal accruals and subdued capacity creation. Looking ahead, its net borrowing requirement is likely to rise on the back of a revival in the capex cycle. These financing requirements will largely be met by households and external resources. Net dissaving of the public sector has been moderating *albeit* unevenly; this sector will remain a net borrower in the economy in view of the critical role envisaged for fiscal policy in shaping India's future.

If the nation as a whole has a deficit, it borrows from the rest of the world and the inflow of foreign savings helps finance its investment needs. For India, domestic savings have largely financed the overall investment requirements of growth, with external financing playing a supplemental role as reflected in largely modest current account deficits. As the productive capacity of the economy rises and its ability to absorb foreign resources expands, the volume of external financing and its composition may undergo fundamental shifts, but in the light of past experiences, external debt sustainability will remain a policy priority.

Given natural endowments, including the workforce and its thrift and productivity, it is the rate of investment that provides the turning points in the economy's growth trajectory as well as its structural shifts. As the economy modernises in the quest of its vision as outlined earlier, market financing will likely grow in depth and sophistication. The institutional architecture of financial intermediation may become more diversified while exploiting niches of specialisation and leveraging on technological solutions.

Historically, phases of growth accelerations in India have been accompanied by higher gross domestic investment rates. A key determinant of the desired investment rate, apart from the overall rate of growth, is the efficiency of capital use in terms of the number of units of capital required to produce one unit of GDP. The lower this incremental capital output ratio (ICOR), the higher the productivity of capital or the marginal efficiency of capital. In most developed countries the ICOR is in the neighbourhood of 3. Over the period 2012-19, the ICOR in India averaged 5.0, but in the last three years, it eased to 4.0. As these efficiency gains rise, the workforce gathers skills and the economic structure acquires sophistication and technological progress, it is possible to envisage the ICOR in the range of 3.5 to 4. Accordingly, the required investment over a decade of high growth would be in the range of 33-38 per cent of GDP per annum. This is by no means infeasible if the peak of about 39 per cent achieved in 2010-11 can be reckoned as the potential. It is possible to finance this desired investment rate with saving rates in the range of 32-36 per cent of GDP, again achievable considering the peak of 37.8 per cent achieved in 2007-08[13]. Looking ahead, this aspiration is premised on an improvement in saving potential among all major constituents – households on the back of a growing skilled workforce; businesses benefiting from the thrust on manufacturing and exports; and governments maintaining the consolidation that is underway. The contribution of external financing can change in magnitude and composition, as stated earlier.

In the rest of my address, I hope to draw on available estimates to track some strategic facets of the evolutionary contribution of finance to India's aspirational goals.

V. Infrastructure

Infrastructure plays a critical role in expanding national production capacity, social welfare, and economic development. Spending on infrastructure

[12] From close to 9 per cent of GDP in 2007-08 to under 1 per cent more recently.

[13] A similar aspiration is expressed in NITI Aayog's "Strategy for New India @75", November 2018.

engenders a GDP multiplier of 2.45 in the year of capital expenditure and 3.14 in the next[14]. With an infrastructure investment requirement of at least 8-10 per cent of GDP annually[15], India's infrastructure gap has been estimated at 4.1 per of GDP per annum, rising to 5.3 per cent when adjusted for climate requirements[16]. Over the period 2024-30, it is estimated that infrastructure investment will need to rise to US$ 1.7 trillion (₹143 lakh crore), with about US$ 0.4 trillion in green investments.[17] Going forward, the private sector will move into centre-stage for infrastructure spending, especially in energy and transportation. The sources of financing will be diverse, ranging from debt and equity issuances in the domestic capital markets to external commercial borrowings and foreign direct investment (FDI).

VI. Micro Small and Medium Enterprises

Micro, small, and medium enterprises (MSMEs) are crucial to India's economic and social progress – it is estimated that the MSME sector accounts for around 30 per cent of India's GDP, 45 per cent of exports and 62 per cent of employment in the business sector.[18] MSMEs are expected to grow in number in the coming years. The overall finance demand of India's MSMEs is around US$ 1,955 billion. Of this, the demand for debt-based finance is pegged at US$ 1,544 billion,[19] with half coming from those that prefer financing from informal sources or from financially unviable enterprises. This leaves a debt demand of US$ 819 billion, of which US$ 289 billion demand is currently fulfilled by formal credit lenders like banks. The remaining unfulfilled demand of US$ 530 billion makes up a huge addressable market for banks, FinTechs and NBFCs.

VII. Skilling

Scaling up for the future will require a multi-faceted approach, prominently involving skilling human resources in line with the acceleration in technological transformation. According to the World Economic Forum, 44 per cent of workers' skills globally would be disrupted in the following five years[20]. To skill the workforce of the future effectively, India needs to invest nearly ₹2-3 lakh crore per annum over the next 6 years.[21] This would include infrastructure, training centres and partnerships with private sectors.

Financing skilling requirements could combine performance-based investment instruments such as bonds intended to finance development programmes with a pre-agreed social outcome; redeemable skill vouchers enhancing chances of wage employment; private equity/venture capital funding for tech-based training platforms, e-learning start-ups and the like; direct support from multilateral agencies, social and private foundations in the form of social development programmes and projects; and working capital financing, trade receivables discounting systems in tie ups with banks to offer institutional credit to trainees and service providers.[22] The Union Budget 2024-25 has highlighted a larger role for the private sector in skilling the labour force. As of now only 36 per cent of companies conduct enterprise-based training.[23] The budget proposal for facilitation of internship opportunities for youth in top 500 companies can increase skilling opportunities for the labour force alongside meeting skill demand from industries.

[14] Discussion on Union Budget 2022-23 in the Rajya Sabha, February 11, 2022; Bose, S. and Bhanumurthy, N. R., 2015, Fiscal Multipliers for India. *Margin: The Journal of Applied Economic Research 9*(4), 379-401.

[15] RBI internal estimates.

[16] Asian Development Bank, 2017, Meeting Asia's Infrastructure Needs, February 1.

[17] CRISIL (2023). India's infrastructure spending to double to ₹143 lakh crore between fiscals 2024 and 2030, compared with 2017-2023. Press Release. October 17.

[18] Government of India, Annual Survey of Unincorporated Sector Enterprises (ASUSE), 2022-23; PIB, 2023, Contribution of MSMES to the Country's GDP, Ministry of Micro, Small & Medium Enterprises. December 11; McKinsey Global Institute, 2024, A Microscope on Small Businesses: The Productivity Opportunity by Country, May.

[19] Avendus, 2023, MSME Lending: Unlocking Potential, Realising Dreams, April.

[20] World Economic Forum, 2023, Future of Jobs Report, May.

[21] RBI internal estimates.

[22] KPMG-FICCI, 2023, Skill Financing in India, September.

[23] International Labour Organization, 2024, India Employment Report 2024: Youth Employment, Education and Skills.

VIII. Climate

Fulfilling India's updated nationally determined contributions (NDCs) to adapt to climate change will require investment of ₹30 lakh crore (US$ 0.36 trillion) over the period 2024-2030.[24,25] India's 'National Green Hydrogen Mission', which aims at a production capacity of 5 million metric tonnes per annum, will involve an initial outlay of ₹19,744 crore or US$ 2.4 billion[26]. Furthermore, the financing requirements to achieve the goal of becoming independent of fossil fuel imports by 2047 and achieving net zero by 2070 are estimated at US$10.1 trillion[27].

Drawing on the recent experience, sovereign green bonds (SGrBs) can be used to finance or refinance green projects. SGrBs could also provide a benchmark for the pricing of green bonds by private enterprise in order to attract globally mobile environment, sustainability and governance (ESG) funds. The inclusion of the renewable energy sector, upto certain limit, under priority sector lending (PSL) by the Reserve Bank of India (RBI) and the "Framework for Acceptance of Green Deposits" is expected to facilitate bank funding of green activities/projects. In conjunction, the RBI's draft disclosure framework on climate-related financial risks will work towards curtailing the misplacing of assets and misallocation of capital due to inadequate information. With 100 per cent FDI under the automatic route for the renewable energy sector and relaxed norms for external commercial borrowings for companies raising funds for green projects under the automatic route, the flow of climate finance, both domestic and international, is expected to increase, once a green taxonomy is developed and aligned with global standards.

[24] PIB, 2024: "India needs ₹30 lakh crore investment during FY 2024-2030 to meet its COP Climate Pledges", IREDA CMD at World Bank Webinar, Ministry of New and Renewable Energy, February 15.

[25] This investment will be required in manufacturing capacity for solar photovoltaic cells, electrolysers, wind energy equipment, batteries, transmission and conversion of waste to energy.

[26] PIB, 2023, National Green Hydrogen Mission, Ministry of New and Renewable Energy, January 3.

[27] Council on Energy, Environment and Water (2021). Investment Sizing India's 2070 Net-Zero Target. November 18.

IX. Digitalisation

India is undergoing rapid digital transformation. In the banking sector, digital banking platforms, mobile banking apps and online services are reducing cash dependency and furthering financial inclusion. Several FinTech companies and digital lending platforms offer quick and hassle-free loans to individuals and businesses, using data analytics and AI to assess creditworthiness.

The success of the Unified Payments Interface (UPI) has been a game-changer, making it one of the fastest-growing digital payment platforms globally. Other developments include the central bank digital currency (CBDC) project or e₹ which has the potential for transforming not only the payments landscape, but also the wider financial system. Digital supply chain finance (DSCF) is another emerging segment which seeks to integrate digital financial services into the supply chain, facilitating smoother transactions, reducing risks and enhancing overall efficiency. Digital technologies are also being used in insurance, capital markets and in expanding rural and urban connectivity and access to digital financial services.

According to the Ministry of Electronics and Information Technology, India could become a US$1 trillion digital economy by 2025, with digital financing needs of around 2.3 per cent of GDP.[28] Extrapolating from this near-term goal, the size of India's digital economy in 2047 would be in the range of US$ 5.4 to 6.9 trillion, and the digital infrastructure financing gap would work out to around US$ 124-159 billion by 2047.[29]

Conclusion

To conclude, India will need a transformation in its institutional architecture for intermediating the needs of finance of its aspirational trajectory. The

[28] India requires investment of up to US$ 23 billion by 2025 in physical digital infrastructure to support the growing demand of digital services and rising online traffic (Ernst and Young and Digital Infrastructure Providers Association (2022). Digital Infra Co – Unlocking the Tower Power. January).

[29] RBI internal estimates.

emphasis would be on financing physical, social and digital infrastructure, skilling, green energy, innovative manufacturing and MSMEs. At its core will have to be a robust corporate bond market with adequate secondary market trading liquidity and breadth. External financing will play an increasingly vibrant role in propelling investment and bringing in new technologies, provided the absorptive capacity in respect of external funding expands with the pursuit of reforms that enhance export potential and attract FDI. In India's quest for higher levels of development, financing should be seen as a facilitator, not an obstructer. As Walter Bagehot, the enunciator of the core dictum of central banking, wrote in his Lombard Street, 'the less money lying idle, the greater is the dividend'.[30] Circling back to where I began on the relationship between finance and growth, I can do no better than to quote the late Anand Chandavarkar, among the finest upholders of the hallowed tradition of practitioners of the economics profession in the RBI[31]: *"the debate about whether financial intermediation and development is a "demand-following" or a "supply-leading" phenomenon is comparatively subsidiary to the question: whether (countries) have the necessary insight and economic statesmanship to adopt appropriate policies?"*

Thank you.

[30] Bagehot, Walter, 1873, Lombard Street: A Description of the Money Market, New York: Scribner, Armstong & Co.

[31] Chandavarkar, A., How Relevant is Finance for Development?, IMF e-Library, https://www.elibrary.imf.org>article-A004-en. Jagdish Bhagwati described Anand Chandavarkar as "in a class by himself, a bibliophile, an intellectual, a gifted writer, and a superb economist, and all this without arrogance and with a lot of grace and charm."