



Mumbai, India

WASATCH EMERGING INDIA STRATEGY

# India's Virtuous Circle of Amazing Progress

## Digitalization, Financialization, Formalization and Industrialization

MAY 27, 2022

### THE "OLD INDIA" MEETS THE "NEW INDIA"

In India, the Hindi term *"jugaad"* is used to describe an improvised fix, or a clever solution born of adversity. In other words, jugaad characterizes a way of life—an attitude of doing more with less.

We like to think of jugaad as representative of the "old India" in which ingenuity was largely confined to low-tech solutions for difficult problems. An example would have been using wooden planks, old Jeep parts and the engine from an irrigation pump to make a cost-effective vehicle for transporting people and supplies. The point is that, generally speaking, Indians are creative and are continually working hard to improve their lot in life.

## India's Giant Leap Forward: Why Now?

"Jugaad" had meant that "old India" always found a way to move ahead incrementally and to make do.

But what's happening today in "new India" is much more than simply making do.

Preparation has met opportunity, and India is currently taking a giant leap forward.

With India's coming of age, expectations are for continued non-linear (exponential-type) growth.

This rapid advancement is happening now because there's been a confluence of positive changes:

- Government initiatives
- Private initiatives

Government reforms over the past several years have given rise to many secular tailwinds.

Industrialization is the latest megatrend that's transforming India's economy and creating new investment opportunities.

In today's "new India," this same spirit of creativity and hard work is being applied to the much more complicated megatrends of digitalization, financialization, formalization and industrialization. As a result, a virtuous circle of amazing progress is rapidly occurring in India—which makes the country the fastest-growing major economy in the world and one of the most fertile emerging markets for finding attractive investments.

Reflecting India's continued progress in the modern age, a new term—**"jugaad innovation"**—has been popularized by the likes of Navi Radjou, a Silicon Valley-based researcher and author who grew up in Pondicherry, a former French colony in southern India made famous by the book and movie *Life of Pi*.

### THE JUGAAD ATTITUDE APPLIED TO TODAY'S FOUR MEGATRENDS: DIGITALIZATION, FINANCIALIZATION, FORMALIZATION AND INDUSTRIALIZATION

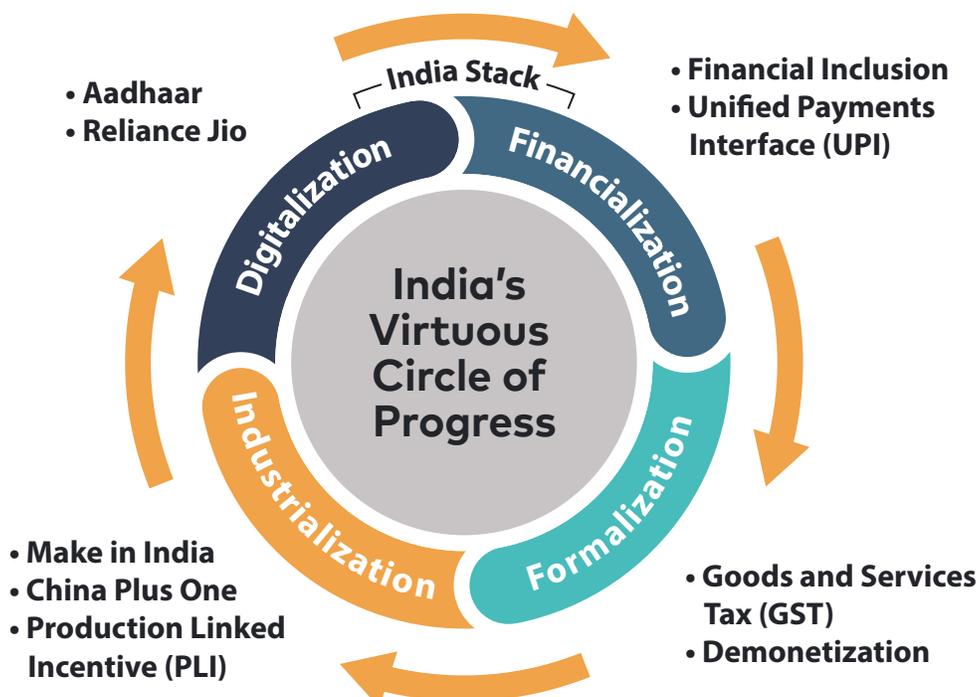
An example of the new wave of innovation has occurred in Kozhikode, a coastal city in the Indian state of Kerala. The city is using a cloud-based digital solution developed by the eGovernments Foundation to get building plans approved—including site inspections—in as little as a few weeks, down from as much as one year.

Similarly, an Indian driver's license can now be obtained through a mobile-phone app, which replaces filling out paperwork and waiting in long lines at the Regional Transport Office. Moreover, the license itself can be stored along with other government records in a DigiLocker, which eliminates the need for tangible documents and lessens the burden of a person's physical presence to accomplish many tasks. Consequently, India's government bureaucracy—which used to be a major impediment—has now been streamlined into a competitive

“Often results are not linear. You get a little bit more mass, and you get a lollapalooza result. Adding success factors so that a bigger combination drives success, often in non-linear fashion, as one is reminded by the concept of breakpoint and the concept of critical mass in physics.”

— Charlie Munger, American Businessman and Longtime Partner of Warren Buffett

#### DIGITALIZATION, FINANCIALIZATION, FORMALIZATION AND INDUSTRIALIZATION ARE TRANSFORMING INDIA



advantage compared to other countries, even developed countries like the United States.

These and countless other examples in India's virtuous circle of progress are being made possible by digitalization, financialization, formalization and industrialization—which are the subjects of this white paper. The way to think about India's progress is as a new, self-reinforcing paradigm, or in Charlie Munger's words, a "lollapalooza result." What this means is that an outcome is much bigger than the sum of its parts and that the previous pace of development no longer holds—perhaps going from linear-type growth to exponential-type growth.

Consider Moore's Law, which in 1965 correctly predicted the approximate doubling in the number of components per integrated circuit every year for at least a decade. This is exponential-type growth because doubling each year is much more powerful than growing linearly by the same amount. Exponential growth is what can totally transform an economy in relatively short order—whether during the Industrial Revolution that began in the late 1700s, the Computer Revolution that began in the 1950s or India's virtuous circle that we see today.

## THE WASATCH TAKE ON INDIA'S VIRTUOUS CIRCLE

Despite the challenges present in all emerging markets, including India, we think it's more important to focus on the positive developments. And if we're correct in our basic investment premise, the headroom for growth should be enormous.

At Wasatch, we've traveled to India for about 20 years. And we meet on site with as many as 100 Indian company management teams annually. Based on this bottom-up, on-the-ground research, our investment premise centers largely on the aforementioned digitalization, financialization, formalization and industrialization. Moreover, we believe these four megatrends should benefit our Indian holdings in particular.

**Digitalization** involves the electronic storage, retrieval and distribution of information—and the ability to communicate, collaborate and be productive with the help of electronic devices. Digitalization means that India is making great strides in the identification of its citizens (with data integrity and security) and in the expansion of the internet and mobile-phone services, often more progressively than developed-market counterparts. Another result is that more can get done electronically with less need for a person's physical presence and with fewer tangible items (like handwritten paper authorizations).

**Financialization** entails the creation and distribution of banking, investment, credit, payment and insurance services. As we explore below, financialization is at the foundation of any well-functioning modern economy. Moreover, digitalization is a critical element of India's rapid financialization—and the interaction of the two is part of India's virtuous circle.

**Formalization** refers to the greater transparency of economic activities and a better regulatory framework. One element of formalization is a simpler and fairer tax system that reduces layers of "petty corruption" and gets tax money to where it's intended—to building infrastructure, for example. Another element of formalization is making personal and business transactions with electronic devices, rather than with tangible currency notes. This way, transactions are conducted more honestly and equitably—and with less "regulatory cholesterol" that clogs economic systems.

**Industrialization** is driven mainly by manufacturing of goods for export. While India has a longstanding segment of highly trained elite workers, manufacturing provides jobs for the many lower-end workers who are less well-educated. Moreover, these jobs should enable the average Indian to afford some of the basic products and services that consumers in the West take for granted. As a result, investment opportunities are likely to expand.

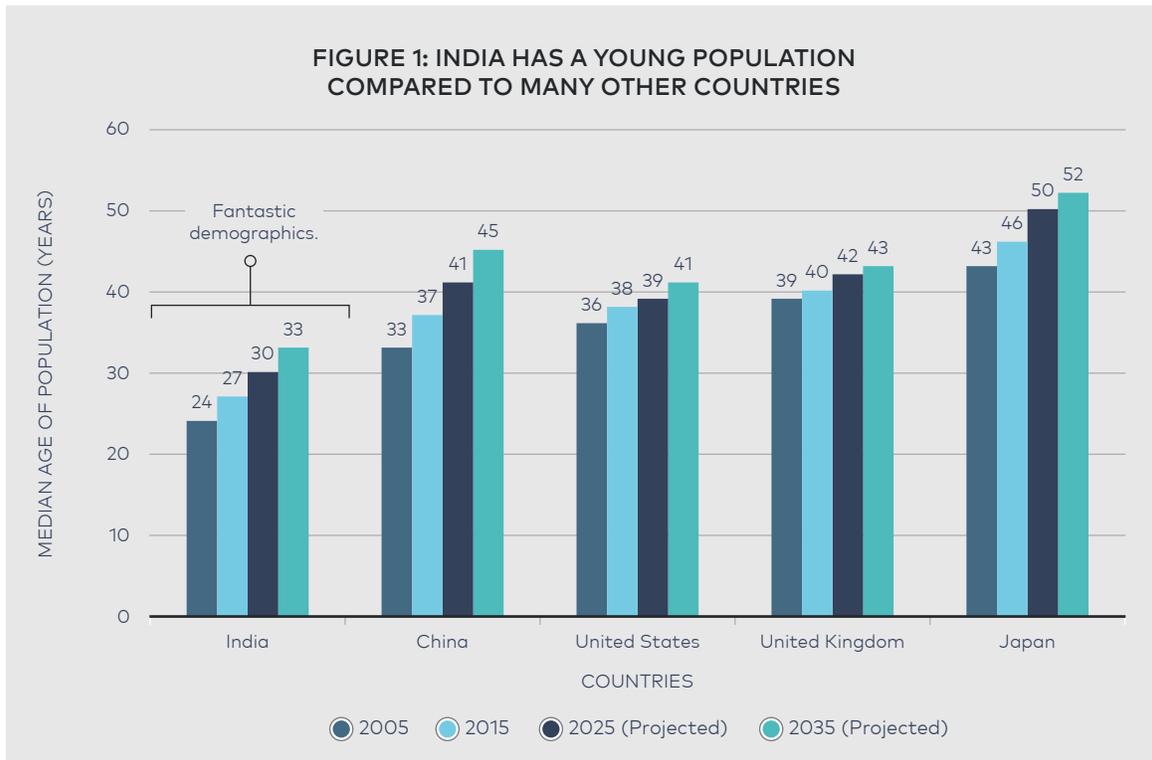
## EMBRACED BY A YOUNG POPULATION: AADHAAR, RELIANCE JIO, THE UPI, THE GST AND THE MAKE IN INDIA INITIATIVE

Among the changes within digitalization, financialization, formalization and industrialization, some of the most important are Aadhaar, Reliance Jio, the Unified Payments Interface (UPI), the Goods and Services Tax (GST) and the Make in India initiative—all of which are explained below. We also believe that India's relatively young population, as indicated in **Figure 1** on page 4, plays a critical role in the country's willingness to adopt these changes so readily.

**Aadhaar**—a public, government-sponsored initiative—uses biometric data to electronically identify almost all of India's adult population. Aadhaar is at the foundation of much of India's digital, financial, legal and regulatory progress.

**Reliance Jio**—a private enterprise—is India's extremely low-cost provider of mobile-phone service that delivers much higher voice and data capacity and uses less bandwidth compared to outmoded technology. With its 4G Long-Term Evolution (LTE) service, Reliance Jio has for the past several years been improving the general population's access to the internet and instant communications.

**FIGURE 1: INDIA HAS A YOUNG POPULATION COMPARED TO MANY OTHER COUNTRIES**



Sources: UN Population database and Macquarie Macro Strategy for years ended December 31.

The **Unified Payments Interface (UPI)** is a completely free service that mostly eliminates the need for credit cards. A single mobile app allows users to transfer money quickly and securely to merchants, utilities, charities, friends, family members, etc.

The **Goods and Services Tax (GST)** simplifies and coordinates India's state- and central-government tax system to make it easier to pay taxes, increase compliance, eliminate multiple layers of taxation, reduce corruption and ensure that tax revenues are more likely to be used for their intended purposes.

The **Make in India** initiative is intended to improve infrastructure, develop skills, foster innovation and secure intellectual property rights. Under the initiative, government incentives spur companies to develop, manufacture and assemble products in India.

“The major disruptors in India today are the youth, mobiles and broadband.”

— Dinesh Malkani  
Former President of  
Cisco India

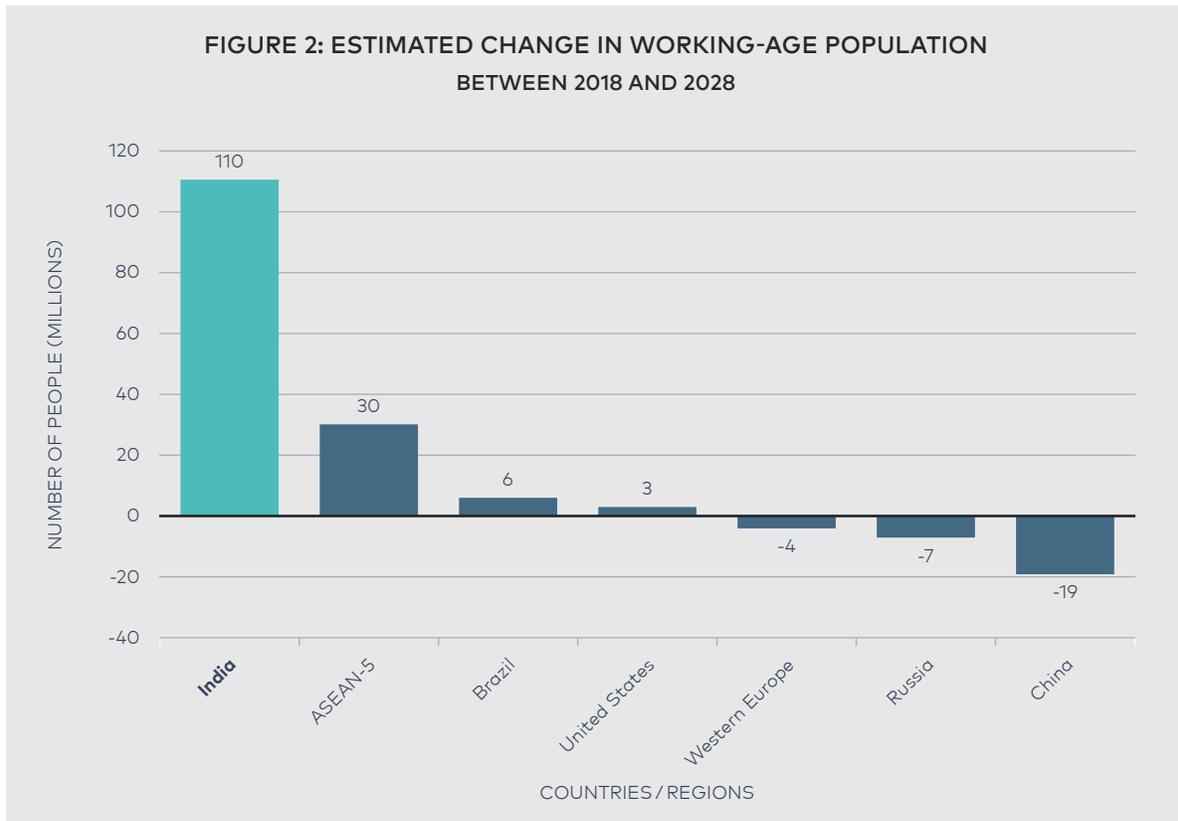
## A YOUNG POPULATION, TECHNOLOGY, TRANSPARENCY AND THE RULE OF LAW

Returning to India's virtuous circle, it started with a relatively young population's willingness to embrace technology, transparency and the rule of law. Extremely rapid progress has ensued from there.

A **young population** is important because radical change is more likely to be accepted by people who haven't lived long lives under an obsolete paradigm. In fact, with over 65% of its total population under age 35, India has the largest group of young people on the planet. In the next decade, as shown in **Figure 2** on page 5, the estimated change in India's working-age population (ages 15 to 64) will be 110 million—making India's workforce the world's biggest at over one billion people. Moreover, among all countries, India has the most English speakers



**FIGURE 2: ESTIMATED CHANGE IN WORKING-AGE POPULATION  
BETWEEN 2018 AND 2028**



Note: The working-age population is defined by the OECD as persons aged 15 to 64 years. The Organization for Economic Cooperation and Development (OECD) is a forum where the governments of 34 democracies with market economies work with each other, as well as with more than 70 non-member economies to promote economic growth, prosperity and sustainable development. ASEAN stands for the Association of Southeast Asian Nations. The ASEAN-5 are defined by the International Monetary Fund as the Southeast Asian nations of Indonesia, Malaysia, the Philippines, Singapore and Thailand.

Source: Macquarie Macro Strategy estimates for the 10 years ending December 31, 2028.

after the United States. This is important because English is frequently the language used for education, training and business interactions around the world.

**Technology** has allowed India to leapfrog outmoded stages of development in the ways people communicate, the ways they live and the ways they work. Just imagine going from having no indoor plumbing or electricity to having a mobile phone and a bank account almost overnight.

**Transparency**—protected, of course, by world-class security—has allowed technology to function properly. Without transparency, technology would be limited in its ability to improve peoples' lives. For instance, the Indian government wouldn't be able to help the poor as effectively if people weren't willing and able to disclose their identities, their circumstances and their needs.

Moreover, transparency is a vital aspect of the **rule of law**, which is a basic element of a thriving economy. People need to know that corruption will be exposed and that what they earn and save won't be stolen through malicious schemes. The rule of law encourages people to engage in productive work and pay their taxes.

So while India is far from perfect, Prime Minister Narendra Modi is trying to set the right tone with, for example, his ongoing pronouncement that's roughly translated as: ***I will not take a bribe, and I will not allow anybody to take one.*** Regarding the continuation of progressive government initiatives, it's encouraging that Modi has about two years remaining in his five-year term—and he may run again in 2024.

## DIGITALIZATION

As for digital technology, perhaps the most significant development is the implementation of **Aadhaar**—a public, government-sponsored initiative that uses biometric data (i.e., fingerprint and iris scans) to capture citizens' data and that fosters digital storage and retrieval of information. The initiative promotes efficient, electronically enabled communications, collaboration and commerce. Think of Aadhaar like a Social Security/ID card that's permanently attached to everyone's fingertip.



Aadhaar is the Hindi word for foundation, and the Aadhaar initiative is built to cover India's almost 1.4 billion people—over a sixth of the world's entire population. The initiative has already registered over 99% of India's adult citizens and is indeed forming the foundation for many government, business and personal priorities. To get a sense of the scope of the initiative, India enrolled more than one billion people in Aadhaar in about five years, which is approximately three years faster than it took Facebook to reach one billion users.

Under Aadhaar, almost every adult Indian's biometric data, photo and basic personal details are tied to a unique 12-digit identification number. The initiative then makes it easy—even for the relatively uneducated masses—to sign up for bank accounts and mobile-phone plans, and to make and receive payments via smartphones.

Aadhaar helps cut out the middlemen who previously charged exorbitant fees to facilitate transactions and loans. Moreover, the initiative enables citizens and businesses to receive government benefits and subsidies—again with less graft and corruption.

Related to Aadhaar is **India Stack**—a set of standardized application programming interfaces, or building blocks—which allows programmers to create technological solutions more easily for governments, businesses and individuals. The goal of India Stack is to form a digital infrastructure that lessens or eliminates the need for paper records and tangible currency, and that uses biometric identification to vastly reduce requirements for peoples' physical presence.

To put this initiative in perspective, India Stack is the world's largest set of open application programming interfaces. In fact, over 100 million Indians already use

DigiLockers to hold more than five billion electronic documents such as birth certificates, tax statements, driver's licenses, motor-vehicle registrations and exam scores.

While the importance of Aadhaar and India Stack can't be overstated, they aren't enough. They work hand-in-glove with phone and internet services, which are addressed by **Digital India**—a coordinated state- and central-government campaign launched in 2015 under Prime Minister Modi. The goal of Digital India is to enhance the country's standing as an efficient, knowledge-based economy. The campaign is supported by the so-called "pillars" of growth.

The first pillar is the creation of **Broadband Highways** to enhance the already-strong broadband service in the country. For rural areas, broadband highways are well on their way to covering thousands of villages. For urban areas, virtual network operators are being used to provide infrastructure and ongoing service, which are required to be present in new buildings and urban developments.

India's telecommunications network is already one of the largest in the world, serving over 1.1 billion mobile subscribers. To enhance this network, the second pillar of Digital India is **Universal Access to Mobile Connectivity**, which aims to provide coverage for the villages in India that don't currently have mobile-phone service.

One of the main initiatives designed to increase low-cost **mobile-phone penetration** is coming from **Reliance Jio**, a private-enterprise mobile-network operator using the 4G Long-Term Evolution (LTE) high-speed wireless standard. Voice over Long-Term Evolution (VoLTE) has much higher voice and data capacity and uses less bandwidth relative to 2G and 3G services. VoLTE is used for mobile phones, data terminals, wearables and other internet-of-things (IoT)



devices. An additional advantage of VoLTE is that it doesn't rely on obsolete circuit-switched voice networks.

Reliance Jio spent about \$32 billion and launched its mobile network in September 2016. The phones that the company offers are very inexpensive, and ongoing service costs next to nothing. Because Reliance Jio launched its network without any legacy 2G or 3G customers, it has a much more efficient system for providing mobile data. The company's long-term plan is to make money on its ecosystem of apps and entertainment.

In 2016, there were about 343 million internet users in India. Five years later in 2021, this total had risen to approximately 846 million. And new users are being added at a rate of over seven million per month. Reliance Jio alone accounts for approximately 450 million users. It's no surprise, then, that Indians are now some of the most voracious consumers of mobile data in the world.

These numbers indicate that over 60% of Indians currently use the internet—mostly through mobile phones. To expand this penetration, the third pillar of Digital India is **Public Internet Access**, which will be implemented through common service centers that will reach thousands of villages. Over the longer term, thousands of post offices will also be converted into multi-service centers that will include internet access.

A specific development related to internet access is **e-Choupal**, a private-enterprise service that links ITC Limited via the internet to a previously fragmented network of rural Indian farms. ITC is a multinational conglomerate that markets a broad array of products and services.

Farms in India have historically been burdened by weak infrastructure and inefficient and costly intermediaries. With e-Choupal, farmers (like the one pictured above) can negotiate and arrange procurement for agricultural and aquacultural products such as soybeans, wheat, coffee and prawns. In addition, e-Choupal provides information about

pricing and better farming methods—and allows farmers to order agricultural inputs like seeds and fertilizers.

A new development still in the pilot phase is the **Open Network for Digital Commerce (ONDC)**, which was launched jointly by the Indian government and the private sector to serve as a common online marketplace. The ONDC is intended to improve privacy and security, include more suppliers, enhance price discovery, increase value and choice for customers, and standardize operations such as inventory management, cataloging, order placement, logistics and fulfillment. Buyers and sellers can use the ONDC to connect and transact business without the need for intermediaries like Amazon.com and Flipkart. Additionally, there's no cost to use the ONDC—so even small, unsophisticated merchants should be in a better position to compete for online orders.

## FINANCIALIZATION

As discussed, digitalization, financialization, formalization and industrialization are all interrelated in India's virtuous circle of progress. For example, digital storage of data makes it possible to bring broad financial services—including bank accounts and electronic funds transfer—to poorer citizens. And without these financial services, large parts of India's economy would continue to operate in the shadows—devoid of formal oversight.

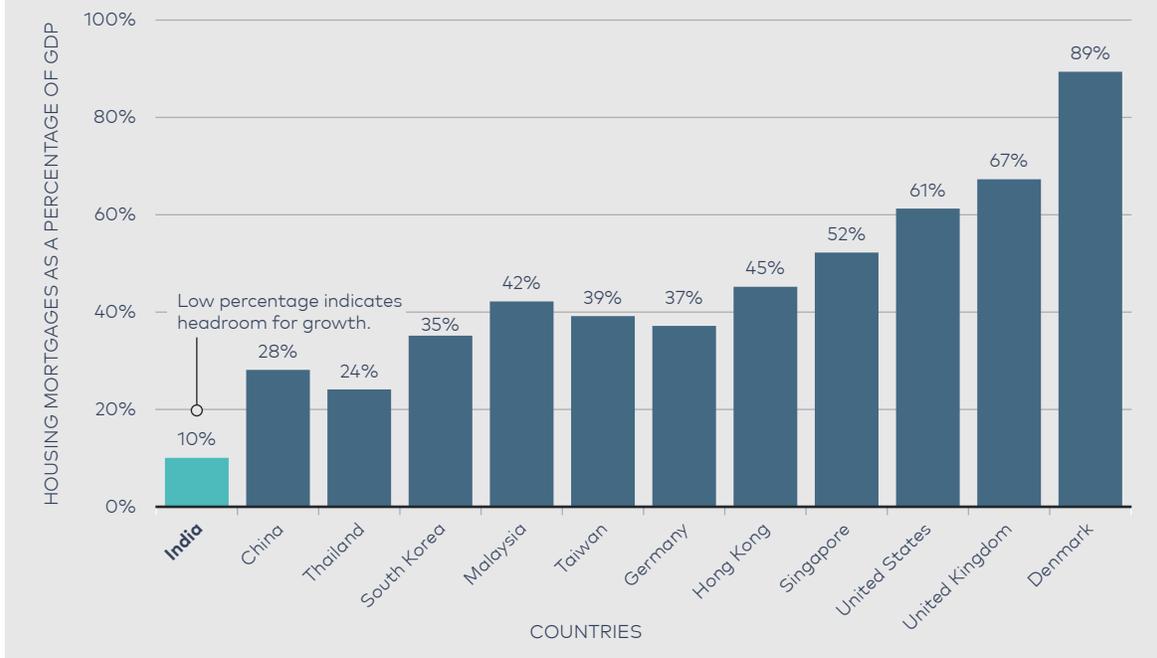
To understand the speed of progress made possible by the virtuous circle, consider that one Indian bank launched a fully digital app through which ordinary people can use a mobile phone to open an account in less than two minutes. This app helped the bank add approximately eight million new accounts in 18 months, about doubling its customer base.

Because most of India's almost 1.4 billion citizens have a unique Aadhaar identity and because the country has made **financial inclusion** a priority, over 80% of adult Indians now have a bank account, compared to 35% about 10 years ago in 2011. And the improvement is especially striking in rural areas, which had previously been excluded from much of the formal economy.

But financial inclusion goes way beyond these statistics. Opportunities to affordably obtain credit (including mortgages and personal, business and farm loans) and insurance are also much more prevalent. Again, this is being accomplished with less usurious interference from corrupt middlemen. **Figure 3** on page 8 shows India's housing mortgages as a percentage of gross domestic product (GDP) compared to other countries, indicating the tremendous headroom for growth in India. Similarly, other forms of credit in India also stand to grow from current low levels.

**FIGURE 3: INDIA'S HOUSING MORTGAGES AS A PERCENTAGE OF GDP COMPARED TO SELECT COUNTRIES**

MOST RECENT DATA AVAILABLE ARE AS OF DECEMBER 2017



Source: hofinet.org.

In terms of money transfers, one of the most important forces has been the **Unified Payments Interface (UPI)**—which was developed by the National Payments Corporation of India, an initiative of the Reserve Bank of India and the Indian Banks' Association. With over 300 banks covered by the UPI, users have 24/7 secure access to a single mobile app for immediately paying merchants and utilities, making donations, giving money to friends and family members, etc. Moreover, like the ONDC, the UPI is completely free and cuts out the credit-card middlemen. Due to the exponential growth of the UPI, India is already the largest real-time payment market—even ahead of China and the United States.

In many countries, banks and other financial-services companies are often seen as lacking dynamism—and are therefore largely absent from growth-oriented investment portfolios. But as you can see from the descriptions in this white paper, the situation in India is very different. And financials therefore represent the largest sector weight in the Wasatch Emerging India strategy.

## FORMALIZATION

Of all the recent legal changes and regulatory reforms in India, the most important one is probably the **Goods and**

**Services Tax (GST) Act of 2017.** Under the GST, which took 17 years to become law, state- and central-government taxes are simplified and coordinated around the entire country. To understand what it was like before the GST, imagine the confusion if states and the federal government in the U.S. didn't coordinate on tax policies and payments.

The basic advantages of the GST relative to the old tax regime are the reduction of "cascading taxes" (taxes on top of other taxes), easier compliance with state- and central-government levies, increased adherence to tax rates, more money in the hands of governments to spend on much-needed infrastructure and other priorities, and lower prices for businesses and individuals.

How has the tax overhaul been accomplished? Again, technology has played a big role. For example, electronic waybills are used to track taxes owed to state and central governments—as well as to track the value added at each stage of production. These improvements help eliminate some of the cascading taxes. Additionally, electronic tracking encourages compliance because participants are held accountable for their own actions and are more confident in the actions of others.

The **Goods and Services Tax Network (GSTN)** is another high-tech development. The GSTN allows state and central governments and taxpayers to use a single GST system for retrieving and inputting information. For example, taxing

authorities can track down individual transactions—while taxpayers can download information for their tax returns. The GSTN set up the entire infrastructure for the GST system and is responsible for ongoing operations, maintenance and improvements. In **Figure 4** below, you can see that Aadhaar, government tax authorities, mobile apps, tax professionals, commercial banks and the Reserve Bank of India—along with widespread internet access—all play vital roles in the integrated GST system.

In the year before the GST was implemented, the Indian government under Prime Minister Modi announced another reform: the 2016 **demonetization** of two high-denomination forms of tangible currency notes. What this meant was that Indian citizens and businesses were forced in relatively short order to exchange their large tangible currency notes for electronic bank deposits.

The benefits of demonetization have been several-fold. First, demonetization has reduced corruption because swindlers have been reluctant to take the risk of being caught trying to exchange counterfeit currency notes. Second, demonetization has helped formalize the economy and—with electronic tracking—bring transactions out of the shadows. Third, demonetization has improved labor practices because it's harder to pay workers under the table. Fourth, demonetization has improved tax collection because transactions have become more open and transfers of tax payments to government entities have been streamlined.

The developments surrounding demonetization are additional examples of key elements in the virtuous circle of progress. It's important to note that Aadhaar—along with widespread electronic bank accounts, internet connectivity and mobile-phone service—made demonetization possible. And demonetization made the benefits described in the preceding paragraph much easier to achieve.

## INDUSTRIALIZATION

Starting in the 1960s, the Asian Tigers—Hong Kong, Singapore, South Korea and Taiwan—and later mainland China transformed their economies through rapid industrialization driven mainly by manufacturing products for export. India, with a government that wasn't highly organized from the top, didn't participate meaningfully in that industrialization. In fact, when we at Wasatch started investing in India about 20 years ago, our focus was on domestic demand for basic consumer goods. Industrialization wasn't even on our radar back then.

Today, the situation is much different. We can peg the dawn of the new environment to 2014 when the government launched the **Make in India** initiative to boost infrastructure spending, enhance skill development, encourage innovation and protect intellectual property. The initiative provides incentives for companies to develop, manufacture

FIGURE 4: GOODS AND SERVICES TAX (GST) SYSTEM



and assemble products in India. More specifically, the Make in India initiative has three main objectives:

1. Generate double-digit annual growth rates for the manufacturing segment of the economy.
2. Add millions of manufacturing jobs for Indian workers.
3. Increase the manufacturing segment's share of GDP to approximately 25% from less than 15% currently.

Lofty objectives notwithstanding, many programs in India take a while to percolate. This was the case for the Make in India initiative, which yielded no meaningful accomplishments for several years. Then all of a sudden, the transformation accelerated.

A driving force has been the *China Plus One* trend in which countries and companies want to diversify their supply chains—at least to some extent (plus one)—outside of China, where manufacturers have become less reliable and more expensive partially due to rising labor costs. Another driving force has been China's zero-Covid policy in which major production and distribution centers have been locked down, exacerbating problems for global businesses that don't have diversified sources of goods and that don't have alternate transportation routes.

Related to the Make in India initiative, the **Production Linked Incentive (PLI)** scheme—which was launched by the government in 2020—is now gaining traction. Under the scheme, the government pays defined percentages to companies based on *increased* levels of manufacturing performed in India. But only certain industries qualify for the incentives. These industries are automobiles (including electric vehicles), auto components, aviation (including drones), chemicals (including advanced chemistry cell batteries), electronics (including mobile phones), food processing, medical devices, metals & mining, pharmaceuticals (including active pharmaceutical ingredients), renewable energy (including solar photovoltaic modules), telecom & networking products, textiles & apparel and white goods (including air conditioners).

The PLI scheme applies to foreign companies and local companies alike, and we're already seeing positive developments on the ground—particularly with regard to infrastructure and transportation in the manufacturing centers of the National Capital Region, Hyderabad and Chennai. The PLI scheme is intended to increase exports and decrease imports of manufactured items. But what may be even more significant is that the scheme is likely to create jobs for India's ballooning labor force.

A major example of recent progress on the manufacturing front is that Apple Inc., citing aspirations to reduce reliance on Chinese suppliers, began producing the iPhone 13 in India. Over the past several years, the Modi government

has used India's status as a major importer of electronics to induce manufacturers to set up shop there. Production incentives, import duties and investment rules requiring local sourcing for 30% of parts were elements of a carrot-and-stick approach that ultimately led Apple in 2017 to begin producing the original iPhone SE in India.

Samsung followed a year later, opening the world's largest mobile-phone factory on the outskirts of New Delhi. Government efforts thus far have rapidly transformed India into the world's #2 manufacturer of smartphones.

In February 2022, the Ministry of Electronics and IT announced that India had received proposals worth over \$20 billion from five companies to manufacture semiconductor chips and digital displays locally. The firms are seeking a total of more than \$8 billion in incentives from the government, according to the official statement.

Inroads in these areas come on the heels of backward integration within India's massive pharmaceutical industry. Previously restricted largely to formulations consisting of active pharmaceutical ingredients (APIs) imported from China, Indian pharmaceutical makers have now begun producing APIs domestically.

While highly skilled upper-level workers are important in India's economy, manufacturing is even more vital to provide a reasonable standard of living and upward mobility for the country's large, young and growing population. Such improvements were what occurred for the Asian Tigers and mainland China.

Now that India is taking its turn at providing manufacturing jobs for the masses, the knock-on benefits should be substantial in areas like financial services and brand-name consumer products. As a result, we're likely to see increased investment opportunities not just in the manufacturing businesses central to industrialization but in all types of companies.

In the near term, we expect to have approximately 10% to 20% of the Wasatch Emerging India strategy's assets invested in companies tied to industrialization. But over time, we think the percentage will increase. And while industrialization in India isn't currently as well-developed as digitalization, financialization and formalization, we believe industrialization may eventually become the most dominant of these four megatrends.

## THE MAGNITUDE OF IMPROVEMENT IN INDIA: DBT, FAIRNESS AND INFRASTRUCTURE

While it's difficult to precisely quantify the virtuous effects of digitalization, financialization, formalization and industrialization, we can make some common-sense

observations. For one, the government pays all sorts of benefits to Indian citizens. Much of these benefits—estimated at about \$80 billion in the fiscal year ended March 31, 2022, as shown in **Figure 5** below—are earmarked for the poor. Unfortunately, large portions of the benefits have historically landed in the coffers of unintended recipients.

This is changing with a financial-inclusion program known as **Direct Benefit Transfer (DBT)**, which was launched in 2013. Because most Indians now have bank accounts, benefits can be transferred directly into these accounts—improving the timeliness of payments, cutting out the middlemen, reducing fraud and putting more money in the hands of those who need it most. Beyond DBT, we think the implementation of many government programs will soon become even more efficient than the implementation of similar programs in developed markets.

In contrast to the negative effects of “cascading taxes” before the GST, we think of digitalization, financialization, formalization and industrialization as providing “cascading benefits.” When people believe they’re being treated fairly, they’re more able to focus on being productive—rather than on “gaming the system.”

Now consider the “petty corruption” and “regulatory cholesterol” that are being reduced in India. Today, obtaining a driver’s license and paying a traffic ticket, for example,

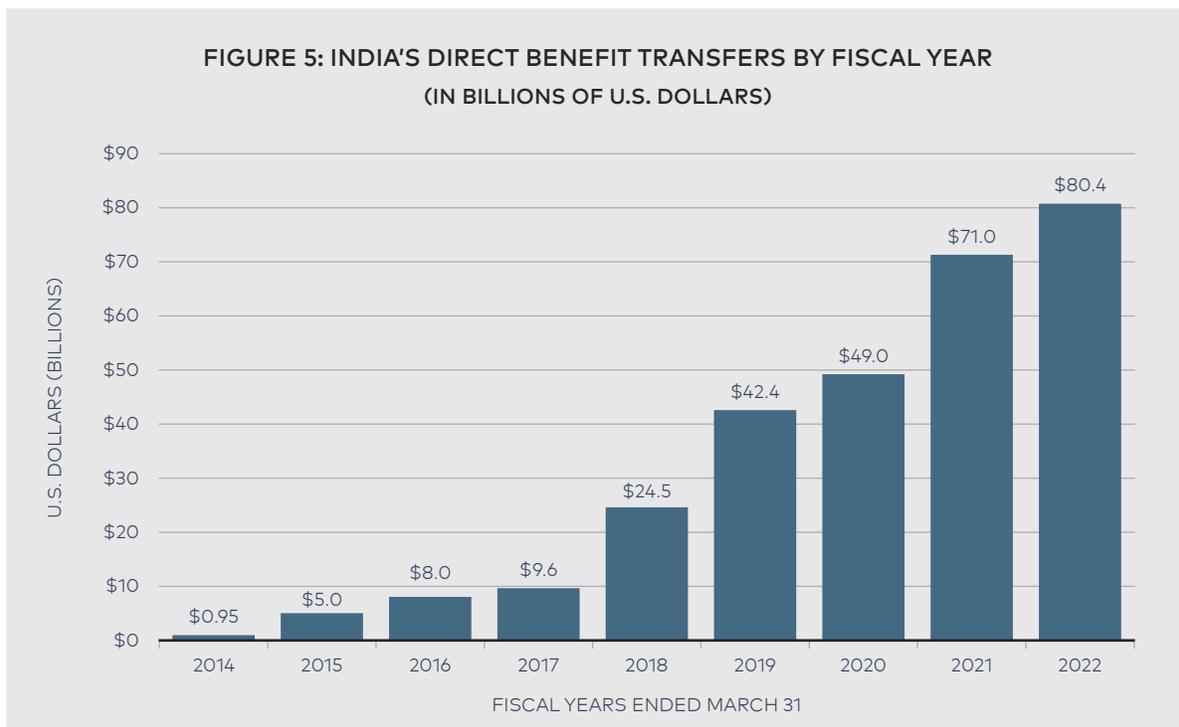
are less susceptible to bribery and delays due to the recent involvement of more digital processes and fewer manual operations. Similarly, complying with state- and central-government laws is easier and fairer because the laws are often being coordinated and enforced with high-tech devices and procedures.

Regarding infrastructure, India has been creating about 30 kilometers of highways per day. And this number is soon expected to jump to approximately 40 kilometers per day. The country is also on track to build cutting-edge metro systems in all of its major cities. Moreover, India has set a target of constructing 220 new airports by 2025.

## SUMMING UP THE OPPORTUNITIES AND IDENTIFYING ATTRACTIVE INVESTMENTS

A person from a developed region visiting India might be surprised by our enthusiasm for the country’s potential. After all, India is still plagued by poverty, pollution and improving but still inadequate infrastructure. Our response is that these things only represent the country’s “hardware,” or what can be seen on the surface.

We believe the country’s “software,” what can only be seen by looking deeper, is in much better shape. India’s software is mostly responsible for the country’s “jugaad innovation” and virtuous circle of amazing progress. In our view,



Source: Direct Benefit Transfer Mission, Government of India for fiscal years ended March 31. Exchange from Indian rupees into U.S. dollars for all fiscal years was calculated in May 2022.

a country's software will be even more important than its hardware for winning in the 21st century.

When we say software, we're not necessarily referring to computer software—although computer software is certainly a big part of the equation. More generally, we're referring to the types of improvements that are described in this white paper.

In a broad sense, India's game-changing software is the country's strengthening embrace of technology, transparency and the rule of law—despite still being far from perfect. Narrowing the focus, India's software relies on the specific initiatives within the long-term megatrends of digitalization, financialization and formalization.

As mentioned, India has a relatively young population. For example, more than 65% of Indians are younger than age 35. This is one of the reasons why Indians are so quick to adopt technology and to reject corruption and outmoded ways of doing business.

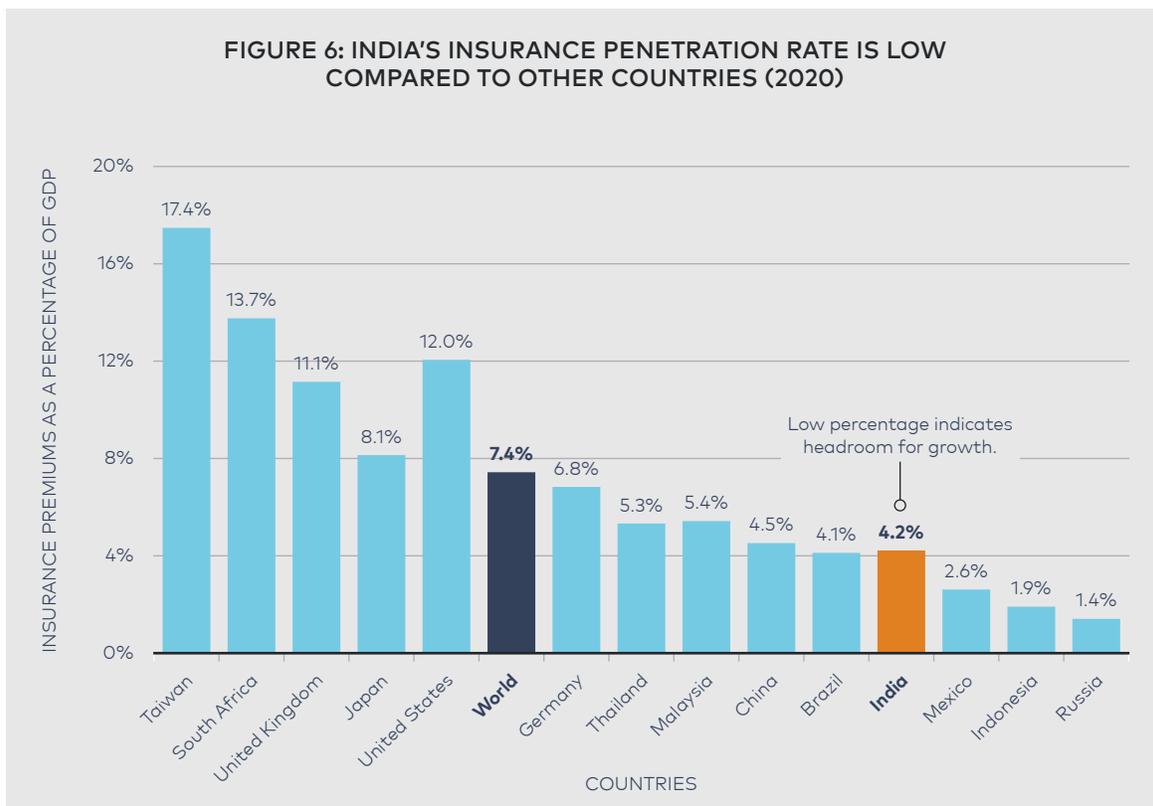
We believe the combination of a young population and new software will create significant benefits in relatively short order. Tax collection and India's fiscal picture will improve. High-quality education will become more widespread. Productivity will skyrocket. Additional money will land in the possession of citizens whose savings and purchasing power will create better prospects for banks and

consumer-products companies. Meanwhile, living conditions will start to catch up with those in developed markets.

In addition to banking and consumer products, insurance is another example of a segment with strong investment prospects. As you can see in **Figure 6** below, India's insurance penetration rate is still very low. With improved, technology-based recordkeeping and distribution—and an expanding middle class—the headroom for growth in insurance is enormous. For largely the same reasons, expenditures on health care are also expected to rise dramatically. This, too, should create long-duration investment opportunities.

Apart from banking, consumer products, insurance and health care, we believe the developments in digitalization, financialization and formalization will benefit increasingly diverse Indian businesses. Put another way, we think India's software will play a major role in improving the country's hardware.

An additional factor that will improve India's hardware even more directly is the fourth megatrend—industrialization. In fact, we have no doubt that over the decades to come, India's manufacturing infrastructure and transportation capabilities will gradually rival those of the Asian Tigers and mainland China.



Source: Macquarie Macro Strategy.

But even without such improvements, our investments in India have been some of our most rewarding emerging-market positions. We look forward to still better opportunities as India's hardware begins to match its software.

## BEYOND THE FOUR MEGATRENDS

Although this white paper focuses on the four megatrends we've identified, there are other reasons for Indian companies' successes—which sometimes occur in spite of India itself.

Unlike the environments in certain more highly developed countries that have a "growth at any cost" mandate, the environment in India has been one in which capital hasn't been as freely available. Consequently, Indian companies have been forced to become extremely focused on profitability, cash flows, returns on assets and returns on equity. As you might expect, strong results in these areas often translate into attractive performance in the stock market.

Long histories of family and executive ownership in Indian businesses and the advanced management practices of multinational corporations in the country have also had very positive influences. In fact, Indian managers—almost all of whom speak English—are some of the most skilled we've ever encountered around the world in both emerging and developed markets.

Finally, our experience shows that we can have considerable success in Indian small caps and larger caps alike. Ideally, we prefer to identify well-positioned companies early in their expansion. But we believe the headroom for progress in India is so enormous that companies can often grow at double-digit rates for many years on end. In other words, India can be an especially good place for our active management style and for "letting our winners run."

## ABOUT THE PORTFOLIO MANAGERS



**Ajay Krishnan, CFA**  
Portfolio Manager—Emerging India

27 / 27  
Years of Experience / Years at Wasatch

Mr. Krishnan joined Wasatch Global Investors in 1994 and serves on the Board of Directors. He is also a Portfolio Manager, the head of emerging markets investing and a member of the global research team.

Mr. Krishnan earned a Master of Business Administration from Utah State University, where he also worked as a graduate

assistant. He completed his undergraduate degree at Bombay University, earning a Bachelor of Science in Physics with a minor in Mathematics.

Mr. Krishnan is a CFA charterholder and a member of the Salt Lake City Society of Financial Analysts.

Ajay is a native of Mumbai, India and speaks Hindi and Malayalam. He enjoys traveling and cycling.



**Matthew Dreith, CFA**  
Portfolio Manager—Emerging India

16 / 10  
Years of Experience / Years at Wasatch

Mr. Dreith is a Portfolio Manager on the emerging markets research team. He joined Wasatch Global Investors as an Analyst in 2011.

Prior to joining Wasatch, Mr. Dreith worked as an investment analyst for the Time Value of Money L.P. in Austin, Texas as well as American Century Investments in Kansas City, Missouri. He also completed an investment analyst internship with Alchemy Capital Management in Mumbai, India.

Mr. Dreith earned a Master of Business Administration degree from McCombs School of Business at the University of Texas. He is also a CFA charterholder.

Matt is a native of Colorado, and has lived in Denmark and India. He enjoys traveling, pushing his limits with spicy food, and reading nonfiction and sci-fi.



**Neal Dihora, CFA**  
Portfolio Manager—Emerging Markets

19 / 5  
Years of Experience / Years at Wasatch

Mr. Dihora rejoined Wasatch Global Investors in 2020 as a Portfolio Manager on the emerging markets research team. His investment career has spanned multiple investment cycles, including four prior years at Wasatch. He has covered companies around the world—and across all sectors.

Prior to rejoining Wasatch, Mr. Dihora was a co-portfolio manager at Nicholas Company Inc., where he managed the small-cap-focused Nicholas Limited Edition Fund. Earlier, he worked as a senior equity analyst at Morningstar, where he covered aerospace, defense, airlines and airports. He also worked as a consultant and as an associate actuary at Milliman, Inc.

Mr. Dihora earned a Master of Science in Finance, Investment & Banking from University of Wisconsin-Madison, and a Bachelor of Business Administration in Actuarial Science & Economics also from UW-Madison. Additionally, he is a CFA charterholder.

Neal was born in Bhavnagar, India and speaks Gujarati. He enjoys basketball, golf and hiking.



**Dan Chace, CFA**  
Portfolio Manager—Emerging Markets

23 / 19  
Years of Experience / Years at Wasatch

Mr. Chace is a Portfolio Manager on the emerging markets and international micro cap research teams. He joined Wasatch Global Investors as a Senior Analyst in 2002.

Mr. Chace has been in the finance industry since 1996, working in the New York offices of J.P. Morgan Securities, SG Cowen Securities, Merrill Lynch, and Oppenheimer & Co. His work in New York was as an equities analyst following Latin American financial institutions.

Mr. Chace earned a Master of Business Administration from Harvard University. He completed his undergraduate studies at Pomona College, receiving a Bachelor of Arts in Cultural Anthropology. He is also a CFA charterholder.

Mr. Chace spent two years in Paraguay with the United States Peace Corps, where he was a volunteer working on water sanitation and health infrastructure projects in rural communities.

Dan is a New Jersey native and speaks Spanish. He enjoys competitive sports and the outdoors, especially trail running.



**Scott Thomas, CFA**  
Portfolio Manager—Emerging and Frontier Markets

17 / 10  
Years of Experience / Years at Wasatch

Mr. Thomas is a Portfolio Manager on the emerging markets and frontier markets research teams. He joined Wasatch Global Investors as a Senior Analyst in 2012.

Prior to joining Wasatch, Mr. Thomas was a vice president at Morgan Stanley & Co. in New York City and worked in equity research for six years. He also worked in the M&A consulting group at KPMG LLP in San Francisco and New York.

In addition to CFA and CPA certifications, Mr. Thomas holds a Bachelor of Science in Accounting from Brigham Young University.

Scott has also lived in Madagascar and La Reunion, France. He speaks fluent French and has conversational knowledge of Malagasy. He enjoys traveling and is an avid golfer and sports fan.

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## ABOUT WASATCH GLOBAL INVESTORS

Wasatch Global Investors pursues a disciplined approach to investing, focused on bottom-up, fundamental analysis to develop a deep understanding of the investment potential of individual companies. In making investment decisions, the portfolio managers employ a uniquely collaborative process to leverage the knowledge and skill of the entire Wasatch research team.

Wasatch Global Investors is an employee-owned investment advisor founded in 1975 and headquartered in Salt Lake City, Utah. The firm had \$29.2 billion in assets under management as of April 30, 2022. Wasatch Global Investors is registered with the Securities and Exchange Commission under the Investment Advisers Act of 1940.

## RISKS AND DISCLOSURES

Investing in foreign securities, especially in emerging markets, entails special risks, such as currency fluctuations and political uncertainties, which are described in more detail in the prospectus. Investing in small and micro cap funds will be more volatile and loss of principal could be greater than investing in large cap or more diversified funds.

**Diversification does not eliminate the risk of experiencing investment losses.**

An investor should consider investment objectives, risks, charges, and expenses carefully before investing. To obtain a prospectus, containing this and other information, visit [wasatchglobal.com](http://wasatchglobal.com) or call 800.551.1700. Please read it carefully before investing.

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*The Wasatch Emerging India Fund's investment objective is long-term growth of capital.*

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## DEFINITIONS

The "cloud" is the internet. Cloud-computing is a model for delivering information-technology services in which resources are retrieved from the internet through web-based tools and applications, rather than from a direct connection to a server.

**Gross domestic product (GDP)** is a basic measure of a country's economic performance and is the market value of all final goods and services made within the borders of a country in a year.

**Return on assets (ROA)** measures a company's profitability by showing how many dollars of earnings a company derives from each dollar of assets it controls.

**Return on equity (ROE)** measures a company's efficiency at generating profits from shareholders' equity.

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