

India Personal Taxes

A decade of formalisation & compliance



India has seen structural widening of the tax base post-2014

Rise in upfront tax collection has strengthened compliance

India scores well on direct tax/ GDP but scores poorly on tax coverage

*Image generated using ChatGPT

Strategy

India Personal Taxes - A decade of formalisation & compliance



India's direct tax system has undergone a structural transformation since 2014, marked by a: (1) sharp broadening of the taxpayer base, (2) compositional shift in collections, and (3) stronger upfront compliance. Over the period FY14-24, individual return filers have grown 2.3x, while the broader taxpayer base, including those paying through TDS without filing returns, has nearly doubled. Personal income tax collections have overtaken corporate taxes, with the former's share rising from 38.1% in FY14 to 53.4% in FY24. Upfront tax capture has strengthened, with TDS collections climbing from INR 2.5trln to INR 6.5trln and advance tax rising from INR 2.9trln to INR 12.8trln over the same period. The introduction of GST in 2017 has further tightened income reporting through invoice-matching and data integration. While India's direct tax-to-GDP ratio has reached 6.6%, ahead of some emerging peers, it is still trailing developed economies. Together, these shifts indicate a structurally narrower space for outright evasion and a more robust compliance architecture than a decade ago.

- **India has seen structural widening of the tax base post-2014:** The number of individual return filers increased from 30.5mn in FY14 to 69.7mn in FY23, while total taxpayers, including those paying tax via TDS without filing returns, rose from 53.8mn to 99.2mn. This expansion is critical as it indicates a systemic reduction in the space available for non-reporting of income. Even if some taxpayers do not file returns, the TDS framework ensures that their income trail is captured. It also reflects both greater formalisation and reduced scope for remaining outside the system, aided by digitisation, AIS/TIS data matching, and restrictions on cash transactions.
- **Personal taxes overtake corporate taxes:** The share of personal income tax in total direct taxes increased from 38.1% in FY14 to 53.4% in FY24, while corporate taxes saw a corresponding decline from 61.9% to 46.6%. This reversal in composition is significant. It suggests that individuals, particularly from salaried and professional segments, are contributing a larger share of the direct tax pool relative to corporates, which historically dominated collections.
- **Rise in upfront tax collection has strengthened compliance:** TDS collections have more than doubled from INR 2.5trln in FY14 to INR 6.5trln in FY24, aided by widened coverage across salaries, professional fees, property transactions, and interest income, alongside tighter digital matching of reported income. Advance tax payments have nearly quadrupled from INR 2.9trln in FY14 to INR 12.8trln in FY24, now contributing ~55% of total direct taxes. This front-loaded payment structure leaves little room for year-end income suppression.
- **GST's ripple effect on income tax compliance:** Since its introduction in 2017, GST has functioned as a structural compliance driver for direct taxation, with spillover effects becoming more pronounced post-2019. The number of active GST taxpayers increased from 12.4mn in 2019 to 14.7mn in 2024, a net addition of 2.3mn entities in 5 years. This growth is not solely attributable to new enterprises; a substantial portion reflects formalisation of businesses that previously operated outside the income tax net. GST's invoice-matching, e-way bill requirements, and input tax credit linkages have created transaction-level digital trails, enabling the income tax department to cross-verify turnover declarations and curb under-reporting.
- **India scores well on direct tax/ GDP but scores poorly on tax coverage:** India's direct tax-to-GDP ratio has improved from 3.2% in FY01 to 6.6% in FY24, placing it ahead of emerging peers like the Philippines (5.5%) and Indonesia (4.4%). However, there is still ample headroom to expand this ratio with developed economies such as Japan (~7.9%), the UK (10.6%) and the US (~13.4%) ahead of India. However, only 6.9% of India's population pays income tax (as of FY23), compared to 24.5% for both the Philippines and Indonesia. Developed economies see coverage of ~50%.

Venkatesh Balasubramaniam
venkatesh.balasubramaniam@jmfl.com | Tel: (91 22) 66303081

Shalin Choksy
shalin.choksy@jmfl.com | Tel: (91 22) 66303380

We acknowledge the contribution of **Shanay Mehta** in the preparation of this report

JM Financial Research is also available on:
Bloomberg - JMFR <GO>,
Thomson Publisher & Reuters,
S&P Capital IQ, FactSet and Visible Alpha

Please see Appendix I at the end of this report for Important Disclosures and Disclaimers and Research Analyst Certification.

India sees a structural widening of income tax base post 2014

India's income tax system has witnessed a notable widening of its taxpayer base over the past decade, reflecting tangible improvements in compliance and formalisation. The number of individual income tax return filers expanded from 30.5mn in FY14 to 69.7mn in FY23, a growth of ~2.3x. While growth in return filers is partly driven by administrative nudges like mandatory return filing for high-value transactions and digitised return processes, it also reflects the gradual inclusion of previously informal economic participants into the tax net.

The number of individual income tax return filers expanded from 30.5mn in FY14 to 69.7mn in FY23, a growth of ~2.3x

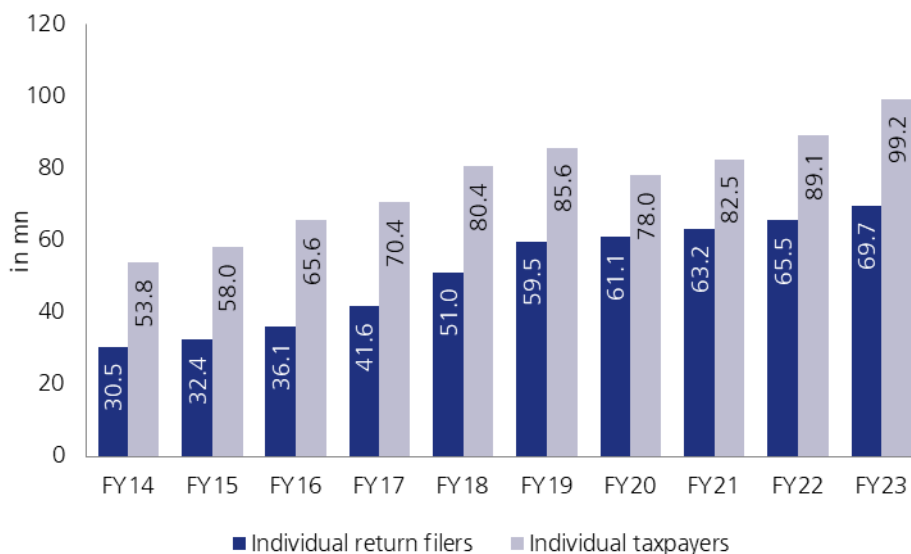
Exhibit 1. Examples of high value transactions getting tracked

SNo.	Transaction	Threshold (INR)	Reporting Authority
1	Cash payment for purchasing bank draft, pay order, banker's cheque or prepaid instruments	1 mn	Banks or co-operative society
2	Cash deposits in a savings bank account	1 mn	- Banks - Co-operative society - Post Master General
3	Cash deposit/ withdrawal from a current account	5 mn	Banks or co-operative society
4	Sale or purchase of an immovable property	3 mn	The Property Registrar/Sub-registrar must report a transaction exceeding the threshold via Form 61A.
5	Investments in shares, mutual funds, debentures and bonds in cash	1 mn	- Company issuing - Mutual Fund Trustee
6	Buy back of shares from any person (than other shares bought in an open market)	1 mn	Listed Company
7	Payment of credit card bill in cash	1 mn	Banks or co-operative society
8	Payment of credit card bill other than cash	1 mn	Banks or co-operative society
9	- Sale of foreign currency - Crediting FOREX card - Spending in foreign currency	1 mn	Authorized Person under the Foreign Exchange Management Act, 1999
10	Cash deposits in FD or RD account	1 mn	- Bank - Co-operative society - Nidhi Company - NBFC
11	Receipt of cash payment for sale	0.2 mn	Any person liable for audit under section 44AB of the Income Tax Act.

Source: JM Financial

However, the impact is more profound when analysing the total number of individual taxpayers, which includes both return filers and those for whom taxes were deducted at source (TDS) even if they did not file returns. This broader base grew from 53.8mn in FY14 to 99.2mn in FY23, marking a near doubling of the compliant population. This expansion is critical as it indicates a systemic reduction in the space available for complete non-reporting of income. Even if some taxpayers do not file returns, the TDS framework ensures that their income trail is captured, substantially lowering avenues for tax evasion at the entry level.

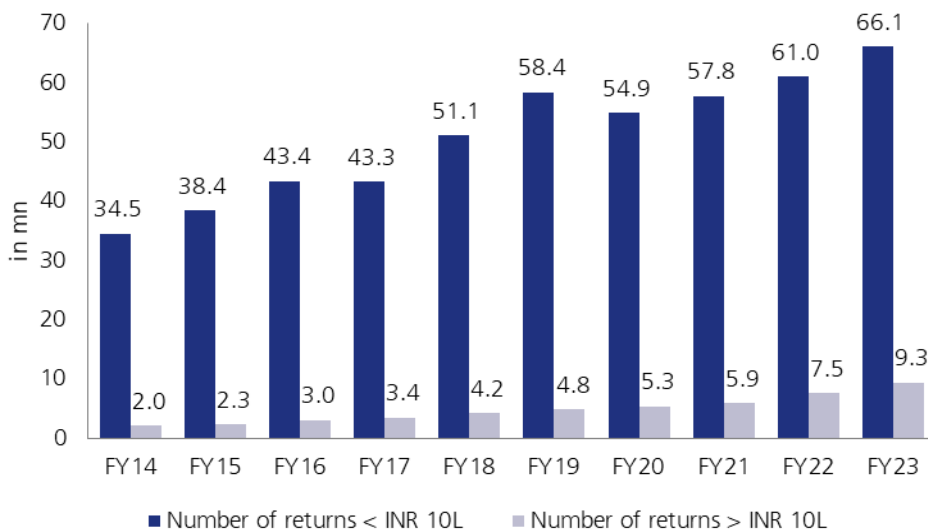
Exhibit 2. Individual taxpayers have seen sharp growth over FY14-23



Total number of individual taxpayers (return filers + for whom TDS was deducted) grew from 53.8mn in FY14 to 99.2mn in FY23, marking a near-doubling of compliant population

Source: Income Tax India, JM Financial

Exhibit 3. Number of individual returns by income



Number of returns filed by individuals with income <INR 10 lakh have grown at a CAGR of ~8% over FY14-23 vs. 18% for individual returns with income >INR 10 lakh

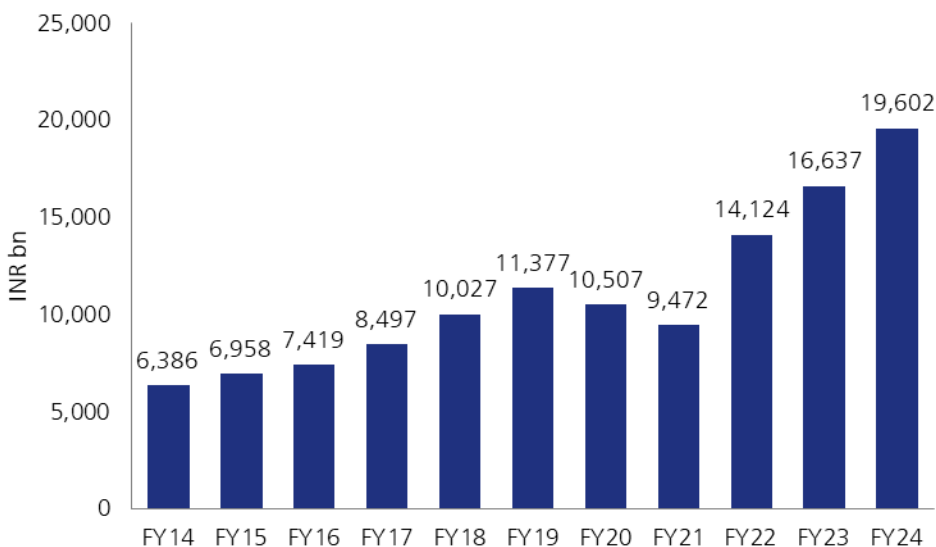
Source: Income Tax India, JM Financial

Personal tax collections have overtaken corporate tax collections since FY21

- Direct taxes have grown at a CAGR of 12% over FY14-24 from INR 6.4trln to INR 19.6trln. Composition of direct tax collections has also shifted in line with a widening base. The share of personal income tax increased from 38.1% in FY14 to 53.4% in FY24, while corporate taxes saw a corresponding decline from 61.9% to 46.6%.
- This reversal in composition is significant as it suggests that individuals, particularly from salaried and professional segments, are contributing a larger share of the direct tax pool relative to corporates, which historically dominated collections. Factors driving this shift include enhanced TDS coverage, formalisation of small businesses, increased digital payment footprints, and stricter enforcement measures.
- These trends point towards a structurally stronger compliance architecture. Expanded return filing, broader TDS coverage, and a rising personal tax contribution base are signals that India's tax net is becoming wider.
- While challenges in underreporting and incorrect income declaration remain, the sharp growth in the absolute number of taxpayers indicates that outright evasion, where income remains completely outside the tax system, is now substantially curtailed compared to a decade ago.

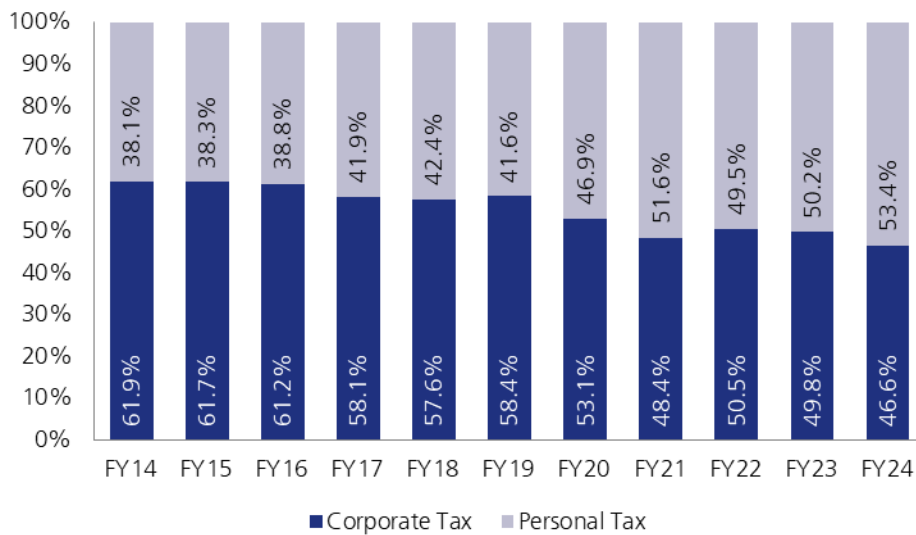
Direct taxes have grown at a CAGR of 12% over FY14-24

Exhibit 4. Net direct taxes collected over FY14-24 (INR bn)



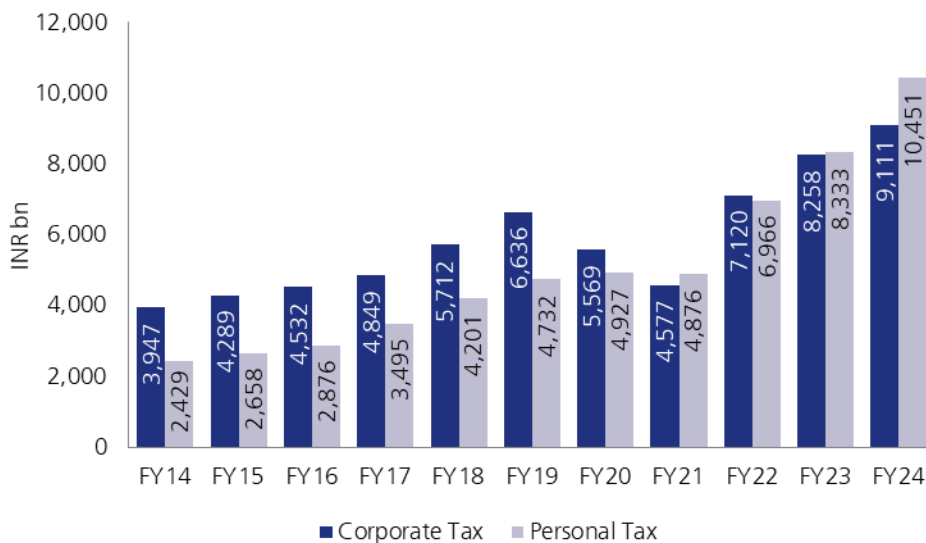
Source: Income Tax India, JM Financial

Exhibit 5. Share of personal tax has surpassed corporate tax since FY21



Source: Income Tax India, JM Financial

Exhibit 6. Corporate tax vs. personal tax collections over FY14-24 (INR bn)



Source: Income Tax India, JM Financial

Upfront tax collection strengthens compliance

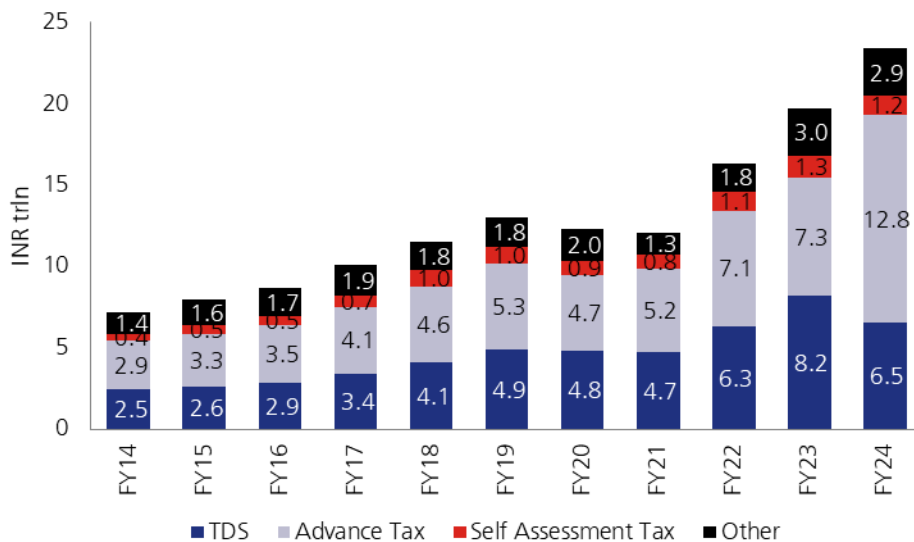
Over FY14-24, India's direct tax collections have surged from INR 6.4tn to INR 19.6tn, but more telling than the top line growth is the shift in composition, pointing to a structural reduction in tax evasion. TDS collections, the most effective tool for curbing concealment by capturing income at source, have more than doubled from INR 2.5tn in FY14 to INR 6.5tn in FY24, aided by widened coverage across salaries, professional fees, property transactions, and interest income, alongside tighter digital matching of reported income.

Advance tax payments, a strong indicator of early income recognition, have nearly quadrupled from INR 2.9trln in FY14 to INR 12.8trln in FY24, now contributing ~55% of total direct taxes. This front-loaded payment structure leaves little room for year-end income suppression. Self-assessment tax collections, which reflect voluntary disclosures beyond what is captured through TDS, have risen from INR 441bn to INR 1.2trln over the same period, signalling greater formalisation and reduced scope for under-the-radar income. The shift is no accident; post-2014, policy measures such as data integration across PAN-linked transactions, mandatory reporting of high-value spends, curbs on cash usage, and greater analytics-driven scrutiny have moved enforcement from reactive detection to real-time capture. The result: not just higher collections, but a structurally narrower space for evasion.

Over FY14 to FY24 personal income tax has grown at a CAGR of 16% vs. 9% for corporate tax

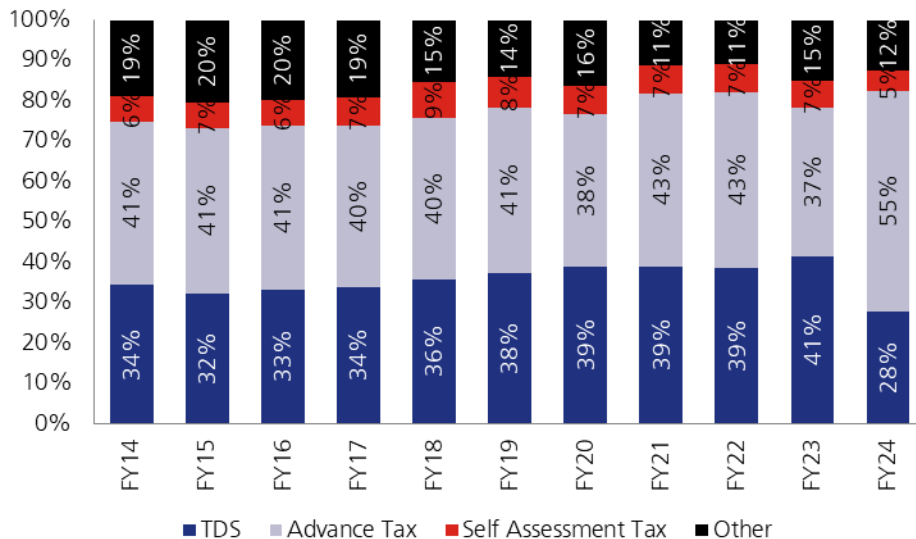
TDS collections, the most effective tool for curbing concealment by capturing income at source, have more than doubled from INR 2.5trln in FY14 to INR 6.5trln in FY24

Exhibit 7. Gross direct tax collection by type (INR trln)



Source: Income Tax India, JM Financial

Exhibit 8. Contribution of each type to direct tax collection



Source: Income Tax India, JM Financial

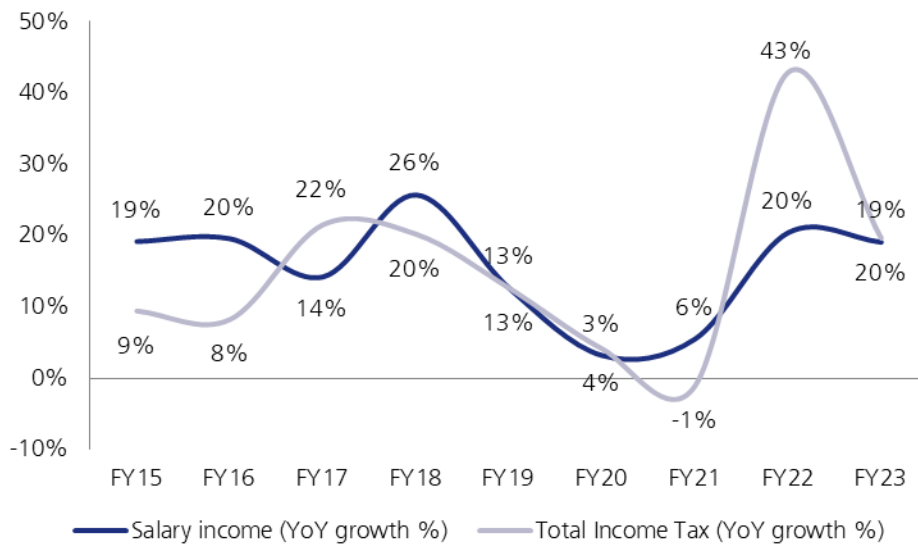
Rise in salary income shows rise in formalisation

- Reported salary income has risen over the past decade, growing from INR 9.8trln in FY14 to INR 35.2trln in FY23, a 3.6x expansion and a 15% CAGR. This growth reflects not only rising wages but also deeper formalisation of the payroll base, driven by digital compliance mechanisms such as TDS expansion, PAN–Aadhar linkage, and electronic salary transfers. This trend becomes clear when mapped against personal income tax collections. Over the same period, personal tax collections rose from INR 2.4trln in FY14 to INR 8.3trln in FY23 at a CAGR of 15%.
- This alignment underscores the pivotal role of salaried taxpayers in sustaining buoyancy in India's direct tax base. Given that salaries are subject to tax deduction at source, scope for under-reporting is limited, making this category a more reliable and predictable contributor compared to business or capital income.
- In essence, the data highlights how salaried taxpayers have emerged as the backbone of India's income tax system. The combination of rising payroll incomes and tighter compliance has not only broadened the tax base but also provided resilience to collections, even through periods of macroeconomic disruption.

Reported salary income has risen over the past decade, growing from INR 9.8trln in FY14 to INR 35.2trln in FY23, a 15% CAGR; over the same period, personal tax collections rose from INR 2.4trln to INR 8.3trln at a CAGR of 15%

- The sustained increase in declared salaries, therefore, serves as a quantitative marker of India's formalisation push and its impact on direct tax buoyancy.

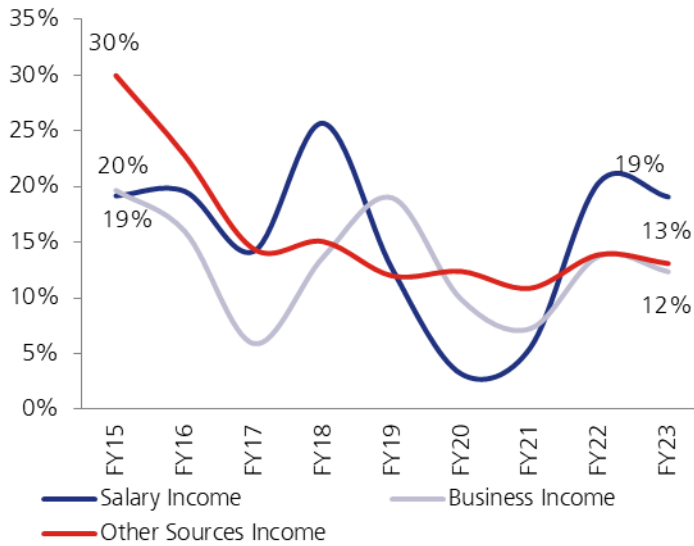
Exhibit 9. Correlation between YoY growth in salary income and personal income tax



Source: Income Tax India, JM Financial

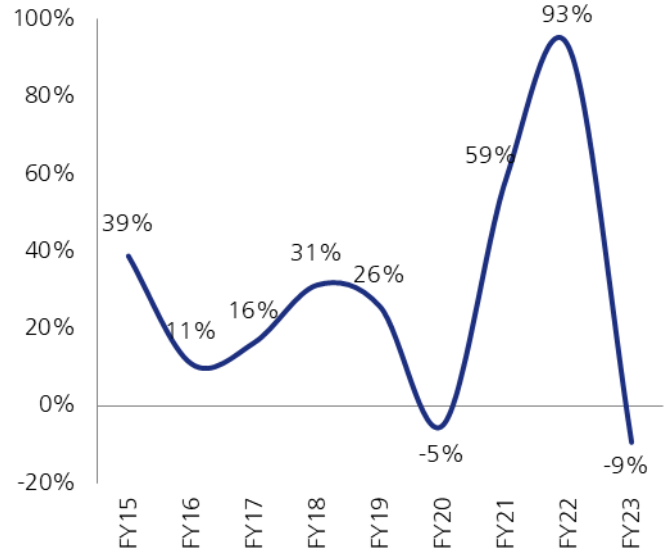
- India's reported incomes show sharp divergences across categories. Salary income has grown unevenly, with strong jumps in FY18 and FY22 but moderation since. Business income remains volatile as well, swinging between high growth and sharp contractions, particularly in FY17 (demonetisation led) and around FY20–21 (Covid led).
- Other sources of income, mainly interest, rent and dividends, have steadily decelerated from >30% growth in FY15 to low-teens in recent years, mirroring lower interest rates and the shift of savings into market-linked assets.
- The most striking change, however, is in capital gains, which surged post-Covid as equity participation and market liquidity accelerated, making them a significant driver of tax buoyancy.
- Together, these trends underscore the growing financialisation of incomes, with salary and business earnings tied to the real economy, while post-pandemic growth in capital gains increasingly shapes the cyclicity of personal income tax collections.

Exhibit 10. YoY growth of salary, business and other income



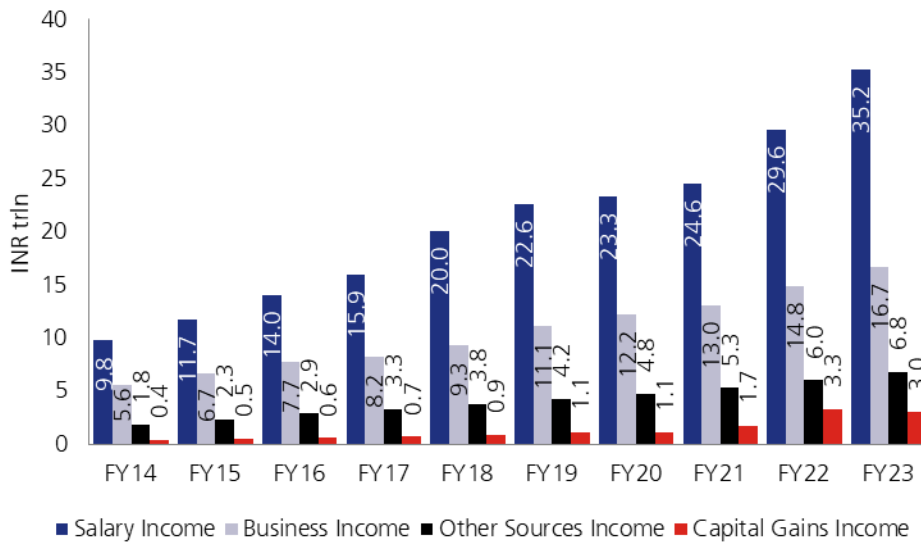
Source: Income Tax India, JM Financial

Exhibit 11. YoY growth of capital gain



Source: Income Tax India, JM Financial

Exhibit 12. Taxable income of individuals by type over FY14-23 (INR trln)



Source: Income Tax India, JM Financial

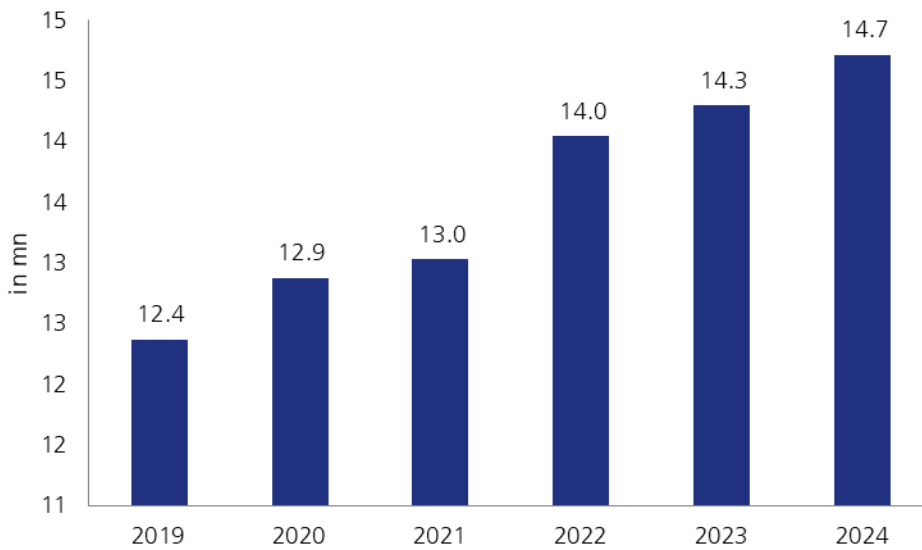
GST's data trail tightens income reporting

Since its introduction in 2017, GST has functioned as a structural compliance driver for direct taxation, with spill-over effects becoming more pronounced post-2019. The number of active GST taxpayers increased from 12.4mn in 2019 to 14.7mn in 2024, a net addition of 2.3mn entities in 5 years. This growth is not solely attributable to new enterprise creation; a substantial portion reflects formalisation of businesses that previously operated outside the income tax net. GST's invoice-matching, e-way bill requirements, and input tax credit linkages have created transaction-level digital trails, enabling the income tax department to cross-verify turnover declarations and curb under-reporting.

The compliance effect is mirrored in the sharp rise in direct tax pre-payments: TDS collections grew from INR 2.5trln in FY14 to INR 6.5trln in FY24, while advance tax surged from INR 2.9trln to INR 12.8trln over the same period, both rising at a pace well above nominal GDP. Such growth indicates more accurate income declaration and reduced cash-based leakage. By integrating indirect and direct tax data flows, GST has materially narrowed avenues for evasion, reinforcing the post-2014 trend of rising voluntary compliance and stronger tax buoyancy.

Since its introduction in 2017, GST has functioned as a structural compliance driver for direct taxation, with spillover effects becoming more pronounced post-2019. The number of active GST taxpayers increased from 12.4mn in 2019 to 14.7mn in 2024, a net addition of 2.3mn entities in 5 years

Exhibit 13. Number of active GST taxpayers by year



Source: GSTN, JM Financial

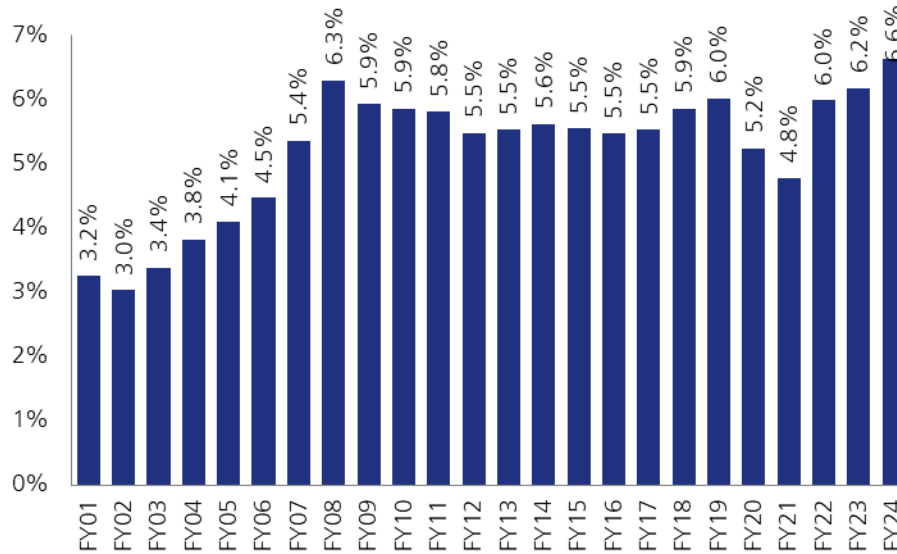
India in the global tax landscape

India performs better than emerging peers on amount of taxes...

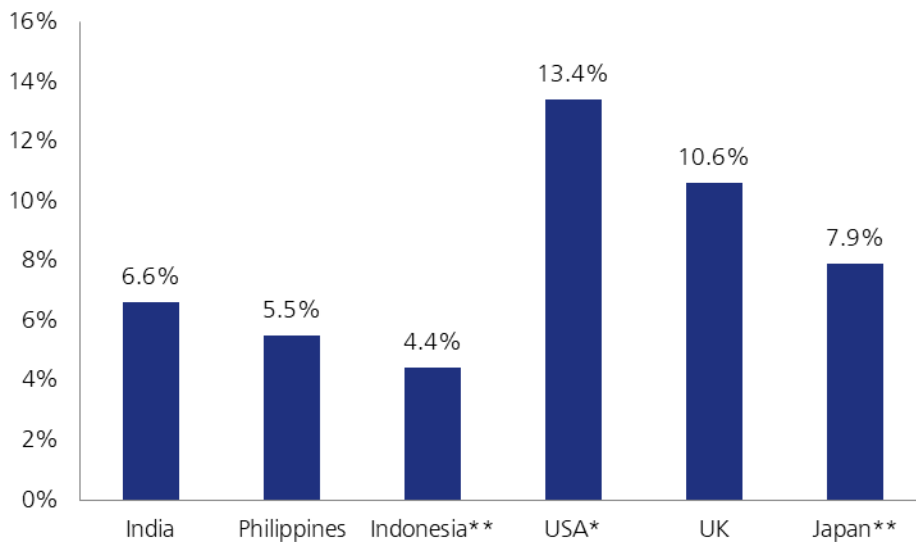
India's direct tax-to-GDP ratio has improved from ~3.2% in FY01 to ~6.6% in FY24, placing it ahead of emerging peers like the Philippines (~5.5%) and Indonesia (~4.4%). However, there is still ample headroom to expand this ratio with developed economies such as Japan (~7.9%), the UK (10.6%) and the US (~13.4%) ahead of India. Direct taxes are underpinned by a much broader and deeper personal tax base in these developed economies.

India's direct tax-to-GDP ratio has improved from 3.3% in FY01 to 6.6% in FY24, placing it ahead of peers like the Philippines (5.5%) and Indonesia (4.4%).

Exhibit 14. India's direct tax-to-GDP ratio



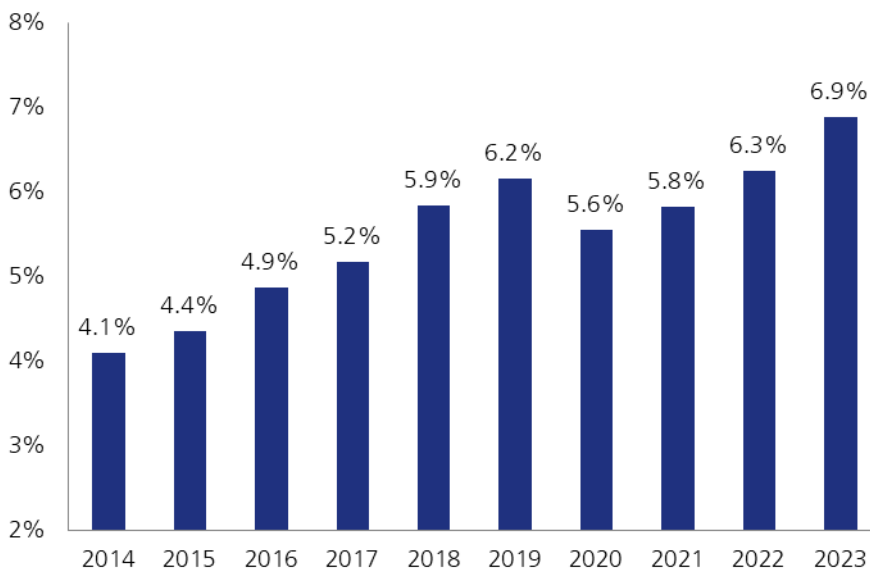
Source: Income Tax India, JM Financial

Exhibit 15. Direct tax-to-GDP ratios amongst global peers (2024)

Source: World Bank, Income Tax India, Bureau of Internal Revenue Philippines, Directorate General of Taxes Indonesia, IRS, HM Revenue & Customs UK, National tax Agency Japan, JM Financial; *includes social security contributions; **2023 numbers

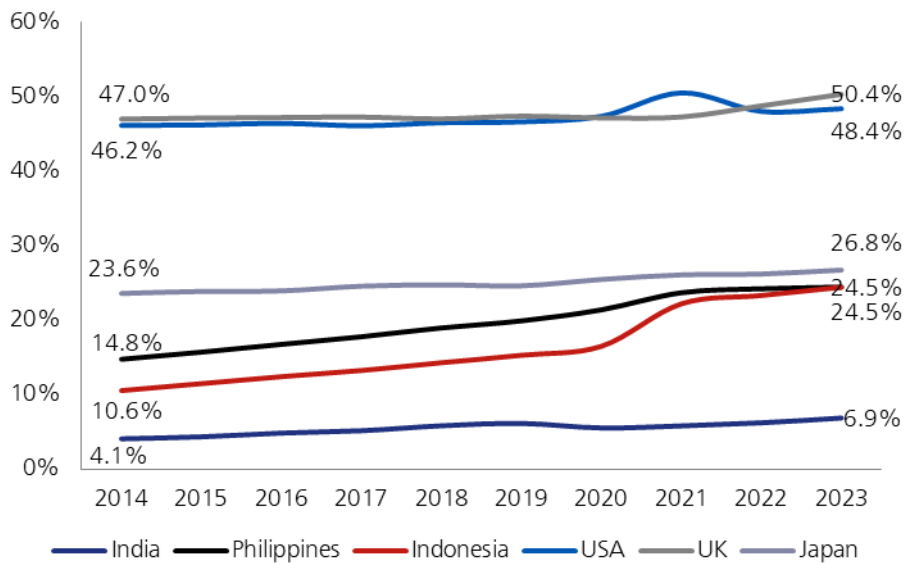
...but lags in terms of participation of the population in taxation

However, only 6.9% of India's population pays income tax (as of FY23), compared to 24.5% for both the Philippines and Indonesia. Developed economies see coverage of 50%. This disconnect between a higher direct tax-to-GDP ratio but lower % of population paying taxes compared to peers is due to a heavy reliance on a small base of formal income earners. A significant share of direct tax collections comes from a relatively small cohort of salaried professionals and large corporates. Further, a large portion of the workforce is employed in the informal sector or engaged in agriculture, which contributes little to personal income tax. India's corporate sector, especially large listed firms, is highly taxed and regulated. Corporate taxes contribute significantly to the direct tax pool, raising the overall direct tax-to-GDP even when individual participation is weak.

Exhibit 16. India – Percentage of the population paying income tax

Source: Income Tax India, JM Financial

Exhibit 17. Global peers - % of population paying income tax



Only 6.9% of India's population pays income tax (as of FY23), compared to 24.5% for both the Philippines and Indonesia. Developed economies see coverage of ~50%

Source: World Bank, Income Tax India, Bureau of Internal Revenue Philippines, Directorate General of Taxes Indonesia, IRS, HM Revenue & Customs UK, National tax Agency Japan, JM Financial

Challenges ahead: Narrowing the final gaps in India's tax net

The last decade has delivered a structural uplift in India's direct tax compliance, but the "final mile" of reform will be harder and slower. The direct tax-to-GDP ratio at ~6.6% in FY24 materially trails the 10–12% range seen in developed economies. Only ~7% of the population pays taxes, leaving a substantial share of economically active individuals outside the net despite broader formalisation. Persistent underreporting in cash-heavy sectors, protracted litigation cycles, and procedural complexity for smaller businesses limit the pace of incremental gains. Delivering the next leg of improvement will require a more targeted, data-driven, and sector-specific strategy.

- **Broadening beyond the core contributor base:** Despite return filers rising from 30.5mn in FY14 to 69.7mn in FY23, tax collections remain concentrated in upper-income segments. Driving compliance among middle-income earners via simplified presumptive taxation and sectoral monitoring could shift the collection profile.
- **Plugging persistent sectoral leakages:** Cash-heavy sectors continue to show gaps between GST turnover and declared income. Advanced GST–direct tax reconciliation and industry-specific audits can tighten reporting.
- **Unlocking revenue from litigation backlogs:** Direct tax disputes remain unresolved, delaying revenue realisation and straining enforcement capacity. Faster dispute resolution frameworks can accelerate inflows and improve taxpayer certainty.
- **Scaling AI-driven enforcement:** The CBDT's Insight platform has expanded third-party data use for risk profiling, but wider integration of banking, GST, property, and securities data—combined with predictive analytics—can help detect underreporting in real time.

APPENDIX I

JM Financial Institutional Securities Limited

Corporate Identity Number: U67100MH2017PLC296081

Member of BSE Ltd. and National Stock Exchange of India Ltd.

SEBI Registration Nos.: Stock Broker - INZ000163434, Research Analyst - INH000000610

Registered Office: 7th Floor, Cnergy, Appasaheb Marathe Marg, Prabhadevi, Mumbai 400 025, India.

Board: +91 22 6630 3030 | Fax: +91 22 6630 3488 | Email: jmfinancial.research@jmfl.com | www.jmfl.com

Compliance Officer: Mr. Sahil Salastekar | Tel: +91 22 6224 1743 | Email: sahil.salastekar@jmfl.com

Grievance officer: Mr. Sahil Salastekar | Tel: +91 22 6224 1743 | Email: instcompliance@jmfl.com

Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

Definition of ratings	
Rating	Meaning
Buy	Total expected returns of more than 10% for stocks with market capitalisation in excess of INR 200 billion and REITs* and more than 15% for all other stocks, over the next twelve months. Total expected return includes dividend yields.
Hold	Price expected to move in the range of 10% downside to 10% upside from the current market price for stocks with market capitalisation in excess of INR 200 billion and REITs* and in the range of 10% downside to 15% upside from the current market price for all other stocks, over the next twelve months.
Sell	Price expected to move downwards by more than 10% from the current market price over the next twelve months.

* REITs refers to Real Estate Investment Trusts.

Research Analyst(s) Certification

The Research Analyst(s), with respect to each issuer and its securities covered by them in this research report, certify that:

All of the views expressed in this research report accurately reflect his or her or their personal views about all of the issuers and their securities; and

No part of his or her or their compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

Important Disclosures

This research report has been prepared by JM Financial Institutional Securities Limited (JM Financial Institutional Securities) to provide information about the company(ies) and sector(s), if any, covered in the report and may be distributed by it and/or its associates solely for the purpose of information of the select recipient of this report. This report and/or any part thereof, may not be duplicated in any form and/or reproduced or redistributed without the prior written consent of JM Financial Institutional Securities. This report has been prepared independent of the companies covered herein.

JM Financial Institutional Securities is registered with the Securities and Exchange Board of India (SEBI) as a Research Analyst and a Stock Broker having trading memberships of the BSE Ltd. (BSE) and National Stock Exchange of India Ltd. (NSE). No material disciplinary action has been taken by SEBI against JM Financial Institutional Securities in the past two financial years which may impact the investment decision making of the investor. Registration granted by SEBI and certification from the National Institute of Securities Market (NISM) in no way guarantee performance of JM Financial Institutional Securities or provide any assurance of returns to investors.

JM Financial Institutional Securities renders stock broking services primarily to institutional investors and provides the research services to its institutional clients/investors. JM Financial Institutional Securities and its associates are part of a multi-service, integrated investment banking, investment management, brokerage and financing group. JM Financial Institutional Securities and/or its associates might have provided or may provide services in respect of managing offerings of securities, corporate finance, investment banking, mergers & acquisitions, broking, financing or any other advisory services to the company(ies) covered herein. JM Financial Institutional Securities and/or its associates might have received during the past twelve months or may receive compensation from the company(ies) mentioned in this report for rendering any of the above services.

JM Financial Institutional Securities and/or its associates, their directors and employees may; (a) from time to time, have a long or short position in, and buy or sell the securities of the company(ies) mentioned herein or (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) covered under this report or (c) act as an advisor or lender/borrower to, or may have any financial interest in, such company(ies) or (d) considering the nature of business/activities that JM Financial Institutional Securities is engaged in, it may have potential conflict of interest at the time of publication of this report on the subject company(ies).

Neither JM Financial Institutional Securities nor its associates or the Research Analyst(s) named in this report or his/her relatives individually own one per cent or more securities of the company(ies) covered under this report, at the relevant date as specified in the SEBI (Research Analysts) Regulations, 2014.

The Research Analyst(s) principally responsible for the preparation of this research report and their immediate relatives are prohibited from buying or selling debt or equity securities, including but not limited to any option, right, warrant, future, long or short position issued by company(ies) covered under this report. The Research Analyst(s) principally responsible for the preparation of this research report or their immediate relatives (as defined under SEBI (Research Analysts) Regulations, 2014); (a) do not have any financial interest in the company(ies) covered under this report or (b) did not receive any compensation from the company(ies) covered under this report, or from any third party, in connection with this report or (c) do not have any other material conflict of interest at the time of publication of this report. Research Analyst(s) are not serving as an officer, director or employee of the company(ies) covered under this report.

While reasonable care has been taken in the preparation of this report, it does not purport to be a complete description of the securities, markets or developments referred to herein, and JM Financial Institutional Securities does not warrant its accuracy or completeness. JM Financial Institutional Securities may not be in any way responsible for any loss or damage that may arise to any person from any inadvertent error in the information contained in this report. This report is provided for information only and is not an investment advice and must not alone be taken as the basis for an investment decision.

This research report is based on the fundamental research/analysis conducted by the Research Analyst(s) named herein. Accordingly, this report has been prepared by studying/focusing on the fundamentals of the company(ies) covered in this report and other macro-economic factors. JM Financial Institutional Securities may have also issued or may issue, research reports and/or recommendations based on the technical/quantitative analysis of the company(ies) covered in this report by studying and using charts of the stock's price movement, trading volume and/or other volatility parameters. As a result, the views/recommendations expressed in such technical research reports could be inconsistent or even contrary to the views contained in this report.

The investment discussed or views expressed or recommendations/opinions given herein may not be suitable for all investors. The user assumes the entire risk of any use made of this information. The information contained herein may be changed without notice and JM Financial Institutional Securities reserves the right to make modifications and alterations to this statement as they may deem fit from time to time.

This report is neither an offer nor solicitation of an offer to buy and/or sell any securities mentioned herein and/or not an official confirmation of any transaction.

This report is not directed or intended for distribution to, or use by any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject JM Financial Institutional Securities and/or its affiliated company(ies) to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to a certain category of investors. Persons in whose possession this report may come, are required to inform themselves of and to observe such restrictions.

Additional disclosure only for U.S. persons: JM Financial Institutional Securities has entered into an agreement with JM Financial Securities, Inc. ("JM Financial Securities"), a U.S. registered broker-dealer and member of the Financial Industry Regulatory Authority ("FINRA") in order to conduct certain business in the United States in reliance on the exemption from U.S. broker-dealer registration provided by Rule 15a-6, promulgated under the U.S. Securities Exchange Act of 1934 (the "Exchange Act"), as amended, and as interpreted by the staff of the U.S. Securities and Exchange Commission ("SEC") (together "Rule 15a-6").

This research report is distributed in the United States by JM Financial Securities in compliance with Rule 15a-6, and as a "third party research report" for purposes of FINRA Rule 2241. In compliance with Rule 15a-6(a)(3) this research report is distributed only to "major U.S. institutional investors" as defined in Rule 15a-6 and is not intended for use by any person or entity that is not a major U.S. institutional investor. If you have received a copy of this research report and are not a major U.S. institutional investor, you are instructed not to read, rely on, or reproduce the contents hereof, and to destroy this research or return it to JM Financial Institutional Securities or to JM Financial Securities.

This research report is a product of JM Financial Institutional Securities, which is the employer of the research analyst(s) solely responsible for its content. The research analyst(s) preparing this research report is/are resident outside the United States and are not associated persons or employees of any U.S. registered broker-dealer. Therefore, the analyst(s) are not subject to supervision by a U.S. broker-dealer, or otherwise required to satisfy the regulatory licensing requirements of FINRA and may not be subject to the Rule 2241 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Any U.S. person who is recipient of this report that wishes further information regarding, or to effect any transaction in, any of the securities discussed in this report, must contact, and deal directly through a U.S. registered representative affiliated with a broker-dealer registered with the SEC and a member of FINRA. In the U.S., JM Financial Institutional Securities has an affiliate, JM Financial Securities, Inc. located at 1325 Avenue of the Americas, 27th Floor, Office No. 2715, New York, New York 10019. Telephone +1 (332) 900 4958 which is registered with the SEC and is a member of FINRA and SIPC.

Additional disclosure only for U.K. persons: Neither JM Financial Institutional Securities nor any of its affiliates is authorised in the United Kingdom (U.K.) by the Financial Conduct Authority. As a result, this report is for distribution only to persons who (i) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Financial Promotion Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000) in connection with the matters to which this report relates may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "relevant persons"). This report is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this report relates is available only to relevant persons and will be engaged in only with relevant persons.

Additional disclosure only for Canadian persons: This report is not, and under no circumstances is to be construed as, an advertisement or a public offering of the securities described herein in Canada or any province or territory thereof. Under no circumstances is this report to be construed as an offer to sell securities or as a solicitation of an offer to buy securities in any jurisdiction of Canada. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the registration requirement in the relevant province or territory of Canada in which such offer or sale is made. This report is not, and under no circumstances is it to be construed as, a prospectus or an offering memorandum. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed upon these materials, the information contained herein or the merits of the securities described herein and any representation to the contrary is an offence. If you are located in Canada, this report has been made available to you based on your representation that you are an "accredited investor" as such term is defined in National Instrument 45-106 Prospectus Exemptions and a "permitted client" as such term is defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Under no circumstances is the information contained herein to be construed as investment advice in any province or territory of Canada nor should it be construed as being tailored to the needs of the recipient. Canadian recipients are advised that JM Financial Securities, Inc., JM Financial Institutional Securities Limited, their affiliates and authorized agents are not responsible for, nor do they accept, any liability whatsoever for any direct or consequential loss arising from any use of this research report or the information contained herein.