The continued success of the India Model

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Research Signals

Over the past several years, economic activity in India has been impacted by major events including the double shock of demonetization and the introduction of the goods and services tax (GST) between late 2016 and mid 2017, a significant corporate tax rate cut in September 2019 and, most recently, the COVID-19 pandemic. With these events in mind, we review the Research Signals India model which has proven successful in navigating the uncertainty surrounding these major events.

- Stocks ranked as buy candidates returned a monthly average of 0.62% in excess of the universe from September 2006 through June 2021, while sell rated stocks trailed with an average excess return of -0.73%
- The spread between top and bottom ranked stocks averaged 1.35% per month and was positive in 73% of months, with robustness across cross-sectional rankings
- Stocks which were recently favored by the model include HDFC Bank, Larsen & Toubro and UltraTech Cement, while Adani Enterprises and Reliance Industries was poorly ranked

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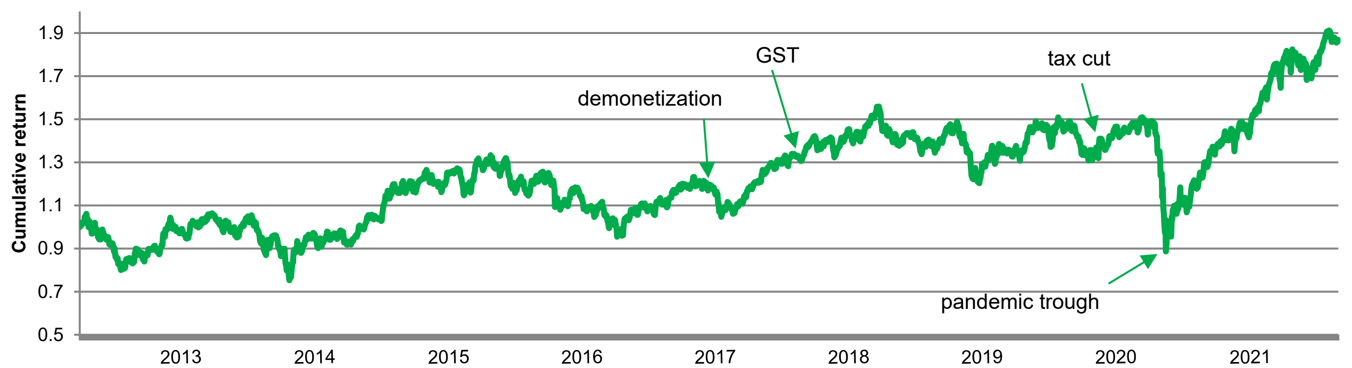
Market overview

We begin with a brief review of economic and market attributes surrounding the Indian business environment. Four years have passed since two major events - demonetization and GST - affected the economy. First, on 8 November 2016, the government announced the recall of the two largest currency denominations issued by the Reserve Bank of India (RBI) in an attempt to combat the black market economy. The disruption caused by reduced currency in circulation was a particular strain on rural communities with limited access to financial services to swap or deposit the notes. Subsequently, year-on-year growth in the Indian economy registered at 6.1% during the March 2017 quarter, down from 7.0% the prior quarter.

The initial response in equity markets (Figure 1) was a sharp decline in prices as gauged by the iShares MSCI India ETF (sourced from the IHS Markit ETF Analytics database). However, stocks recovered handsomely leading up to the next market disruption on 1 July 2017 which marked the rollout of the GST regime. Following over a decade of negotiations, the GST replaced the complex scheme of multiple national and state-specific indirect taxes with just three components - central GST, state GST and integrated GST. Industries that were expected to benefit the most under the new regime included large-scale manufacturers and retailers in fast-moving consumer goods, logistics and warehousing, automotive and the power sectors.

Figure 1

iShares MSCI India ETF NAV



Source: IHS Markit

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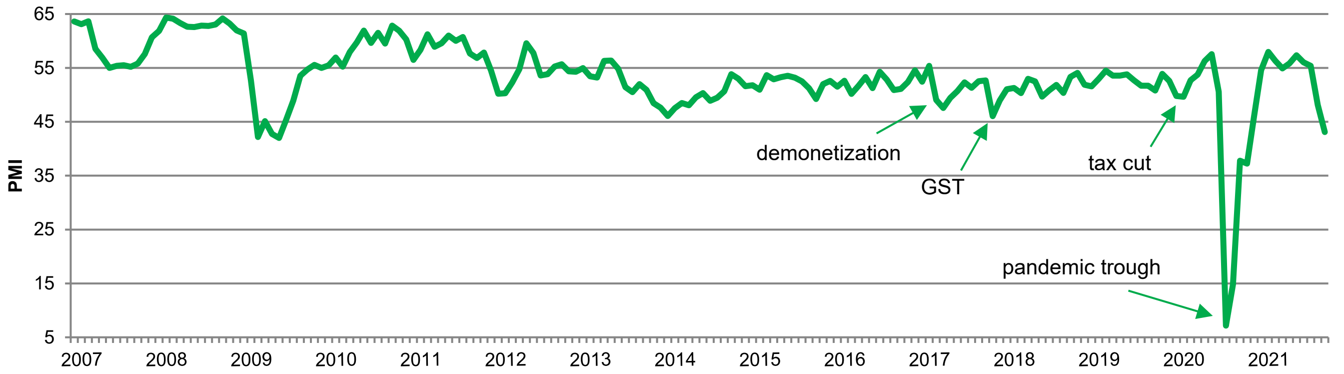
The economy responded with a plunge in activity as indicated by the July Composite PMI Output Index (Figure 2) for both manufacturing and services sectors (46.0, down from 52.7 in June). The oil refinery industry is just one example in which the demand for petroleum products contracted by 0.4% year-on-year for the period through August, according to IHS Markit's economists, partly related to the effects of demonetization followed by the introduction of the GST. Furthermore in August, the RBI cut its leading repurchase rate by 25 basis points to 6% as inflation eased to record lows on softer domestic demand, partly due to steep discounts ahead of the GST. However, by September the PMI readings recovered from the GST-related contractions, moving back into expansion territory (51.1, up from 49.0 in August).

Figure 2

India Composite PMI



Source: IHS Markit

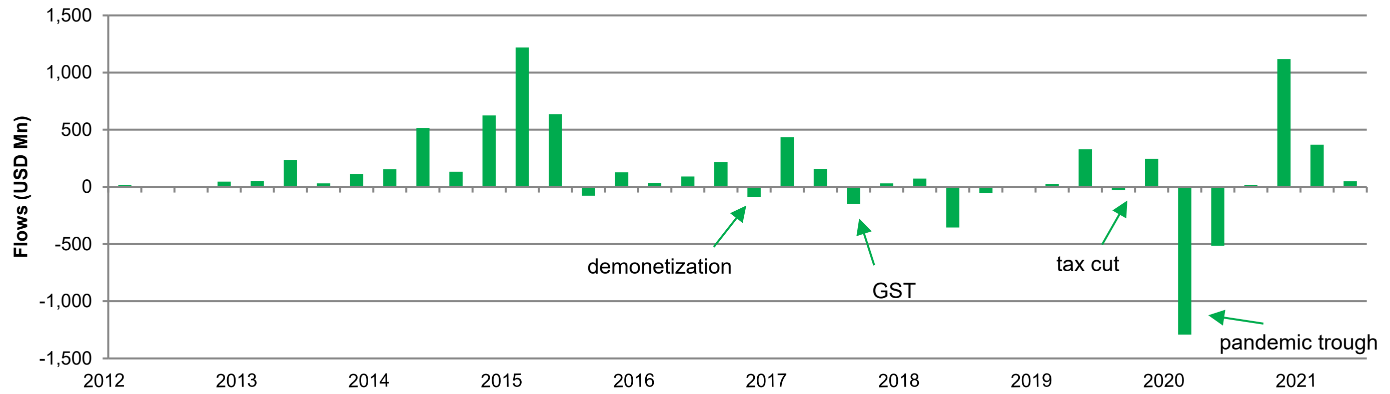
Another significant economic event was the biggest corporate tax cut in the country's history, as the Narendra Modi-led government Finance Minister, Nirmala Sitharaman, announced on 20 September 2019 a cut in the basic corporate tax rate for domestic companies to 22% from 30% to address the country's slowing economy. The move made India regionally more competitive, as its tax rate had previously been among the highest in south and southeast Asia. Equity markets celebrated the news as stocks trended upward, prior to the extreme selloff at the onset of the COVID-19 pandemic. Economic activity also responded well to the tax cut, with the Composite PMI recovering from the October 2019 near term low of 49.6 to 57.6 in February 2020, before the shutdown in business activity wreaked havoc on the economy, with the Composite PMI plummeting to 7.2 two months later.

Equity ETF investors responded differently to the various events based on iShares MSCI India ETF flows (Figure 2). In the immediate months following the demonetization, funds flowed out of equity ETFs in India, resulting in a Q4 2016 outflow of USD 87 million. However, the reaction was short-lived as investors poured money back into the ETF, contributing to a Q1 2017 inflow of USD 435 million, the highest level since Q2 2015. The immediate reaction to the GST also resulted in an outflow in Q3 2017 of USD 148 million; however, the 2019 tax cut in the final days of Q3 2019 had a more positive impact on ETF investor sentiment, with a positive flow in the following quarter of USD 246 million. Overall sentiment also recovered quickly from the record quarterly pandemic-driven outflow in Q1 2020 (USD 1.3 billion), with a Q4 2020 inflow of USD 1.1 billion, the second highest quarterly inflow on record.

The current outlook for the economy is now focused on the extent of the damage from the second wave of COVID-19 and the widespread restrictions on non-essential activity, countered by the speed of vaccination, which would determine how quickly domestic demand turns from damage control to recovery mode.

Figure 3

iShares MSCI India ETF quarterly flows



Source: IHS Markit © 2021 IHS Markit

Data and methodology

We now review the Research Signals India model built from our 300+ global factor library which includes a collection of proprietary regional and industry-specific models, complemented by other specialty datasets including ESG and Institutional Ownership factors. The model is calibrated for the India market and is a multifactor combination of value, growth, momentum, quality and earnings revision related factors (see the Appendix for the full model definition).

For a brief overview, the valuation module seeks to identify companies that are undervalued relative to other companies in the universe using factors such as TTM Operating Cash Flow-to-Price, Dividend Yield and Sales-to-Price. We also incorporate quality factors that demonstrate the strength of management and company operations to identify companies that manage their capital structure well and achieve a high return on invested capital and assets, including TTM Free Cash Flow-to-Sales, Retained Earnings-to-Total Assets and Free Cash Flow Return on Invested Capital.

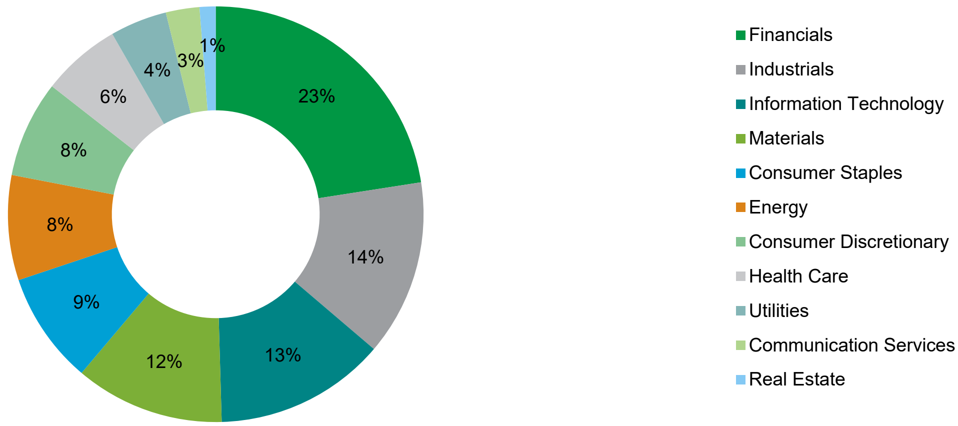
Earnings momentum factors are additionally employed to differentiate companies where profitability is expected to increase from those where profitability is decelerating. Price momentum factors round out the model, using technical indicators identifying stocks where the market is starting to recognize a turning point.

To test factor efficacy, we capture performance at the extremes by computing quintile returns in excess of the market (local currency). The long-short spread is also calculated based on an investment strategy going long the highest ranked stocks (Q1) and shorting the lowest ranks (Q5). The information coefficient (IC) measures the correlation between model ranks (percentile) and subsequent returns, representing the cross-sectional predictive power of the signal.

Performance results span the major events delineated above in addition to global financial crisis (during the model's development period), covering nearly 15 years of data beginning in September 2006 (note that the model went live in May 2011). The universe is the Research Signals India STDCAP universe consisting of approximately 440 constituents on average over the reporting period and sits at 472 names as of 30 June 2021. The Financials sector has the largest representation with a 23% weight by market cap (Figure 4).

Figure 4

India universe sector market cap distribution, Jun 2021



Model performance

We now present performance of the Research Signals India Model. Table 1 summarizes monthly performance statistics including the average and standard deviation along with the information ratio (IR), capturing the risk-adjusted performance, and hit ratio, measuring the number of months with positive performance.

For a long-short strategy, the average monthly Q1-Q5 spread reached 1.35%, with positive results in 73% of months. This strategy has desirable characteristics of low volatility (standard deviation: 3.12%), translating to an IR of 0.43. The robust performance was supported by the model's efficacy in identifying both buy and sell candidates. Stocks which the model identified as buy candidates or to overweight (Q1) posted an average monthly return of 0.62% and, on a risk-adjusted basis, we report an IR of 0.38. Conversely, stocks which the model recommended to avoid, underweight or sell recorded an average monthly return of -0.73% and correctly underperformed the universe in all but 28% of months.

Table 1

India Model monthly performance statistics, Sep 2006 - Jun 2021

	Q1	Q5	Q1-Q5 spread	IC
Average	0.62%	-0.73%	1.35%	0.06
Standard deviation	1.64	1.97	3.12	0.09
IR	0.38	-0.37	0.43	0.61
Hit rate	65%	28%	73%	75%

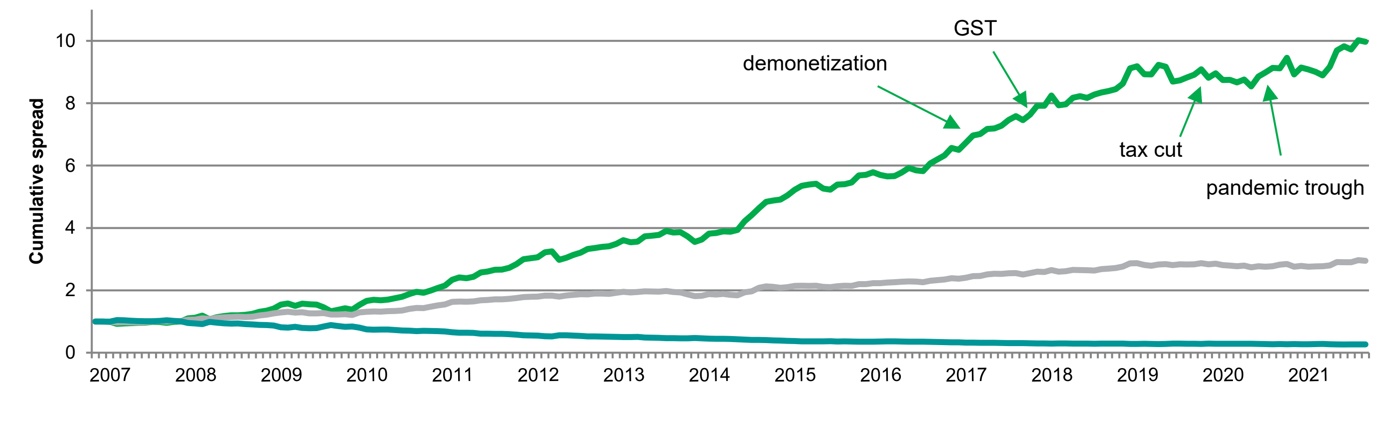
Source: IHS Markit

The time series display of the model, Q1 and Q5 cumulative returns (Figure 5) accentuates the consistency in model performance. Monthly returns for Q1 stocks posted a cumulative return of 195% over the full analysis period compared with -0.74% for Q5. The resulting cumulative Q1-Q5 spread return for the model was 897%, or 16.8% annually.

Focusing specifically on the demonetization, GST, tax cut and pandemic events, we remark that, first, while the market underperformed in November 2016, the model held up quite well with a positive Q1 excess return of 2.20% while Q5 trailed the market by 1.25% (IC: 0.12). In July 2017, we also find positive model performance with a Q1 (Q5) excess return of 1.75% (-0.65%) and an IC of 0.10. Lastly, while positive performance was recorded in September 2019 as the tax cut was announced (spread: 1.67%; IC: 0.05), the pandemic shook up markets months later; however, model performance has remained on a mostly positive trajectory with an average monthly spread of 1.00% since March 2020.

Figure 5

India Model quintile spreads



Source: IHS Markit

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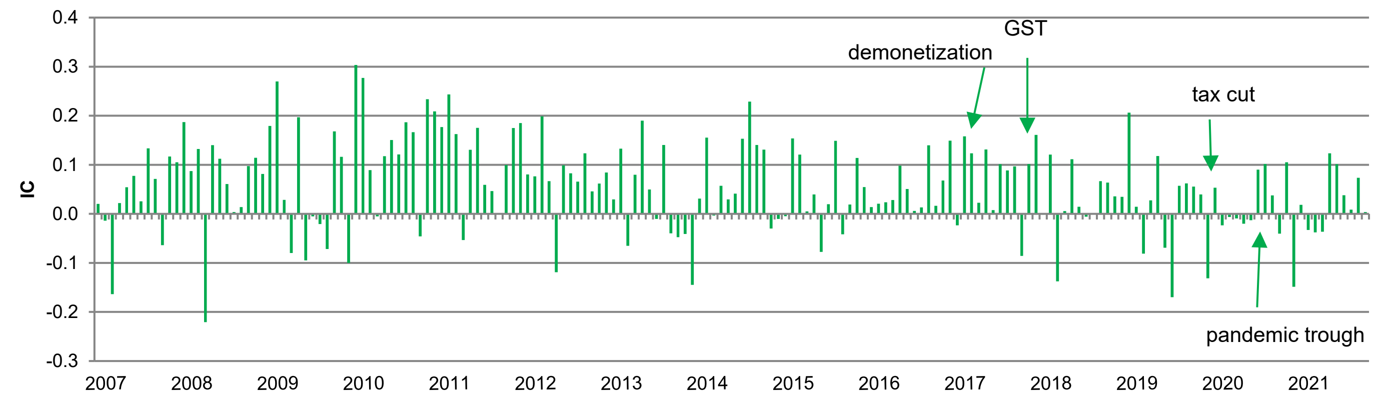
Finally, from a cross-sectional perspective, monthly ICs (Figure 6) also point to robust model performance, with an average IC of 0.06 and a notable hit rate of 75% over the analysis period. The quintile return distribution (Figure 7) further confirms the breadth of the signal efficacy with a monotonically decreasing trend from the top ranked group to the bottom.

Figure 6

India Model ICs



Source: IHS Markit

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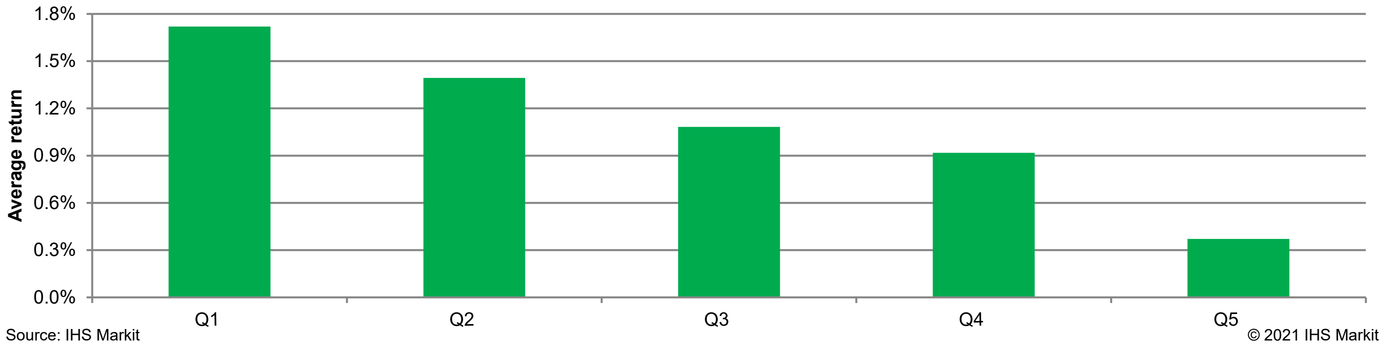
Figure 7

India Model average quintile returns, Sep 2006 - Jun 2021



Source: IHS Markit

Stock level detail

We round out the report with stock level detail for the India model to provide a current snapshot of model positioning. We report the top 10 names by market cap for the best and worst positioned names in the India universe (Table 2). Financials are well represented among the top ranks, while Consumers Staples and Utilities firms populate several of the worst ranked stocks. Favorably ranked names which scored in the top quintile include Reliance Inds, Indian Oil Corp, Kotak Mahindra Bank and Bharti Airtel Ltd. At the other extreme, bottom scores for the model are associated with Dr Reddys Labs and Alkem Lab Ltd.

Table 2

India model largest market cap top and bottom quintile ranks, Sep 30 2017

Name	Sedol	Sector
Top ranks		
HDFC Bank	BK1N461	Financials
Housing Development Finance	6171900	Financials
ICICI Bank	BSZ2BY7	Financials
Axis Bank	BPFJHC7	Financials
Larsen & Toubro	B0166K8	Industrials
UltraTech Cement	B01GZF6	Materials
JSW Steel Ltd	BZBYJJ7	Materials
Oil & Natural Gas Corp	6139362	Energy
Adani Port Special	B28XXH2	Industrials
Hindustan Zinc	6139726	Materials
Bottom ranks		
Adani Enterprises	B01VRK0	Industrials
Reliance Inds	6099626	Energy
Hindustan Unilever	6261674	Consumer Staples
Bajaj Finance Ltd	BD2N0P2	Financials
Kotak Mahindra Bank	6135661	Financials
Avenue Supermarts	BYW1G33	Consumer Staples
Adani Green Energy	BD6H7M6	Utilities
Divi's Laboratories	6602518	Health Care
Adani Transmission	BYPCLL6	Utilities
SBI Cards & Payment	BKPFMG9	Financials

Source: IHS Markit

Conclusion

Developed using our 300+ global factory library, the Research Signals India model is one of many proprietary models designed to exploit region-specific market attributes. The aim of the model is to identify undervalued, well managed firms with signs of fundamental improvement with positive price trends.

Reviewing model performance since September 2006, buy-rated stocks posted an average monthly return (hit rate) of 0.62% (65%). Stocks which were disfavored by the model returned -0.73% (28%), resulting in a Q1-Q5 spread of 1.35% (73%). Results held up well to significant events including the double shock of demonetization and the GST, the tax cut in September 2019 and the COVID-19 pandemic, with robustness across cross-sectional rankings confirmed by an average IC of 0.06 (hit rate of 75%).

Lastly, we drill down to the stock level with focus on the top 10 names by market cap for the best and worst positioned names based on recent scores. HDFC Bank, ICICI Bank, Larsen & Toubro and UltraTech Cement are among the favorably ranked names, while Adani Enterprises and Reliance Industries are poorly ranked.

Appendix

India model definition

- **Management Quality (20%)**
  - Equity Turnover Ratio
  - Fixed Assets Turnover Ratio
  - Free Cash Flow Return on Invested Capital
  - Net Debt Ratio
  - Operating Cash Flow Profit Margin
  - Retained Earnings-to-Total Assets
  - Revenue per Employee
  - TTM Free Cash Flow-to-TTM Sales
- **Value (20%)**
  - Tobin q
  - TTM Cash Flow-to-Price
  - TTM Dividend Yield
  - TTM EBITDA-to-Enterprise Value
  - TTM Sales-to-Price
- **Additional factors (60%)**
  - 1-Year Price Momentum Indicator
  - 1-Year Change in Sales
  - 3-M Revision in FY1 EPS Forecast
  - 60-Month Alpha
  - Average Trading Volume in preceding 6-Months
  - Book Leverage

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