

Annexure to the Directors' Report

Management Discussion and Analysis Report

CRISIL Businesses

CRISIL is a leading agile and innovative global analytics company, driven by its mission of making markets function better. We are India's foremost provider of ratings, data, research, analytics and solutions to corporates, financial markets, and the economy at large. A strong track record of responsible growth, culture of innovation and global footprint sets us apart. We have delivered independent opinions, actionable insights and efficient solutions to over 100,000 customers. Our businesses operate from India, the United States (US), the United Kingdom (UK), Argentina, Poland, China, Singapore and the United Arab Emirates (UAE). We are majority-owned by S&P Global Inc, a leading provider of transparent and independent ratings, benchmarks, analytics, and data to the capital and commodity markets worldwide.

Ratings

Corporate bond issuances rose during the year, albeit driven by issuances from a smaller base of issuers comprising public sector financial institutions and financial sector entities with strong parentage. Certain issuers, especially non-banks and housing finance companies with wholesale lending model, continue to face resource-raising challenges.

Going forward, muted private expenditure, combined with slowing domestic and export demand, are likely to constrain wholesale credit demand. Besides sluggish demand for wholesale bank credit, the BLR market remains affected by the guidance from several large banks increasing the minimum threshold exposure that would require a bank loan rating.

The securitisation market continues to see buoyant issuances on the back of investor preference for securitisation in a cautious environment and partial credit enhancement (PCE) scheme announced by the government.

On the regulatory front, the Securities and Exchange Board of India (SEBI) announced a series of changes aimed at higher disclosure by credit rating agencies (CRAs), in the interest of investors. It brought in standardization in monitoring and recognition of defaults and also prescribed standardised and uniform probability of default (PD) benchmarks for all CRAs. The latter was a global first. SEBI has instructed CRAs to seek inputs directly from audit committees of issuers of listed securities they rate. It has also asked for greater disclosures from listed issuers on any defaults on their financial obligations.

New client acquisitions, healthy traction in securitisation, and independent credit evaluation of stressed assets maintained CRISIL Ratings' market leadership in 2019. As

many as 2,232 new BLRs and over 7500 SME gradings and assessments were assigned in the year. Ratings have been assigned to more than 33,000 large and mid-size corporates till date, and performance of over 1,50,000 SMEs assessed. We also on-boarded several new large corporate clients and also gained significant revenue traction in stressed assets. Despite intense competition and considerable price erosion, we were able to increase our market share in the BLR space, in terms of no. of new clients rated.

CRISIL Ratings initiated development of a new platform and enhanced the existing technology platform in 2019, which would further enhance operational effectiveness and regulatory compliance.

On the innovation front, CRISIL Ratings continues to be the first port of call for innovative instruments. In 2019, CRISIL Ratings assigned rating to the Bharat Bond ETF and India's first PCE covered bond transaction under Reserve Bank of India's (RBI's) PCE scheme. We also rated first retail operating lease rental securitisation. In another first, we assigned credit rating to a wholesale real estate sector securitisation transaction in the market.

Further, during the year, CRISIL GAC enhanced its support to S&P Global Ratings Services on surveillance activities and led streamlining initiatives in the data and analytical domains. GAC also continued to partner in market outreach efforts and content creation for publications.

Research

GR&A

The global banking industry continues to face global headwinds and increasing margin pressures. Though the regulatory environment has matured across the US, the EU environment remains volatile. In addition, trade war and Brexit-related developments have added to the business uncertainties.

However, global banks continue to make strategic investments in long-term business transformation and process reengineering initiatives, sustaining demand for our regulatory and non-regulatory change management offerings. This has driven an appetite for automation and data analytics driven solutions, as firms look to adapt technology to improve their operational performance and gain competitive advantage.

Our research business is looking at expanding in areas such as credit risk and buy side with increased engagement with global financial institutions. Emerging pain across many regions will continue to keep credit risk in focus, which augurs

well for our offerings. While working towards making further inroads in existing relationships within credit risk, we will continue to focus on selling 'subsidiary analysis' in the EU and target regional banks in the US.

For bespoke, we plan to tap opportunities within the lending business, reserve-based lending offerings, and covenant monitoring offerings in the coming quarters. The approach and staffing strategy of our customers with respect to analytics is evolving. We see more promise on the products/solutions side over the mid-term. We also expect increased interest in our credit risk automation solutions.

The business saw impact from a maturing CCAR cycle. However, we are witnessing increasing traction for our model development, validation, documentation, and audit offerings across Tier-II and regional banks. Opportunities across European (ex-UK) banks will continue to grow on the back of the targeted review of internal models (TRIM) audits conducted by the European Central Bank (ECB).

There is also a growing demand for modular, off-the-shelf solutions across the spectrum of model risk management (MRM) and financial crime and compliance (FCC) analytics, as an increasing number of smaller, regional banks are being brought under the regulatory radar. Additionally, our clients' needs to continually benchmark their efforts, improve risk management practices, and gain efficiencies will drive the ecosystem agenda. A business model that enables mutualisation of non-competitive processes, tackles emerging risks, and allows for data pooling, will continue to gain momentum across the industry.

India Research

Despite the ongoing slowdown in the economy, the India Research business saw significant traction for data, analytics and benchmarking mandates from the banking and financial services sector.

In Fixed Income Research, we consolidated our strong position in the valuation space by winning mandates from general insurers and corporates. We continue to be one of the largest providers of fixed-income indices in India. We launched five new indices in 2019, which took the total count of our indices to 96.

We have also identified customer need for comprehensive data – both structured and unstructured – solutions that can be integrated into legacy workflows that facilitate way better analytics. Quantix, our new product, fulfils this need with its advanced tools and analytics, and comprehensive database of more than 60,000 companies.

Our Training Business offered multiple open house and customised programmes during the year, tapping demand from NBFCs, small finance banks (SFBs) and public sector banks. We launched 50 unique open house programmes and an e-learning course to enable a much larger user base to benefit from CRISIL's expertise in credit and risk management.

We also launched the state-of-the-art learning management system (LMS portal) to provide complete e-learning solutions and on-boarded three large clients.

The CRISIL Centre for Economic Research (C-CER) and the CRISIL Research businesses continued to focus on franchise and thought-leadership activities by conducting distinctive research on contemporary issues.

CRISIL Coalition

CRISIL Coalition continued initiatives aimed at enhancing market relevance and broadening the reach to include more regional players. In 2019, Coalition added four new logos to its impressive list of global investment banks. New and more granular IP was developed to cater to newer clients, such as the regional banks.

Coalition reinforced its leadership with the top 15 banks by meeting most of the heads of CIB and all heads of GM/IB businesses, in addition to presenting to 150+ Executive Committees at various banks. More than 90+ publications globally carried our views and quoted it during the year. We were referenced by leading global banks in 100+ investor relations presentations.

On the operations side, we continued our focus on automation and digitisation. We remain focused on automating our research value chain, which will enable better data discovery in research and analytics. Coalition retained the coveted SSAE16 SOC2 Type II certification, which is a testimony of the stringent controls and measures deployed for data and IP protection.

Infrastructure Advisory

Despite continued slowdown, CRISIL Infrastructure Advisory booked several new assignments and strengthened the order book during the year. The business won a couple of large-value multi-year implementation support and programme management mandates. Some of the prestigious mandates were programme management for the Smart City Implementation Project for Diu; development plan of new towns proposed along the Nagpur-Mumbai Expressway, land use and development plan for Panvel city, project management unit (PMU) for sustainable green finance housing project from the National Housing Bank, various mining-auction assignments in Karnataka, Gujarat and Odisha; assistance in setting up first gas-trading hub; airport privatisation; PMU for Swasthya Sathi programme in West Bengal, and assisting National Highways Authority of India as a transaction advisor for Toll-Operate-Transfer Bundle 3, including organising two high-level investor roadshows.

The business deepened international presence by winning mandates in the emerging markets of Asia and Africa, including: development of a modern and cost efficient freight logistics system in Uganda, framing mine sites and mine closure guidelines for Zambia, solid waste management and

PPP prefeasibility studies in Tanzania, strategic assessment of solid waste management services and systems in Nepal, identification of PPP projects in Namibia, investment funding mechanisms and institutional setup options for a national urban flood risk investment programme for Indonesia.

CRISIL Infrastructure Advisory also successfully hosted the third 'CRISIL India Infrastructure Conclave' on November 26, 2019 in New Delhi under the signature franchise platform, Infra Intelligence. The conclave theme this year was - 'The 'central' role of states in India's infrastructure build-out'. The event also saw the launch of the third edition of the CRISIL Infrastructure Yearbook – a one-of-its-kind annual publication that provides deep insights into the infrastructure sectors in India, with a specific focus on preparedness of states this year. The yearbook was launched by Nitin Gadkari, Minister for Road Transport & Highways of India. K T Rama Rao, Minister for IT, Industries and Commerce, Telangana was the keynote speaker, and Kenichi Yokoyama, Country Director, ADB, was the guest of honour. Several dignitaries and speakers/panelists also participated. The event was well received by media.

Business Intelligence & Risk Solutions (BIRS)

The BIRS business is uniquely positioned to help banks and financial institutions in their data and analytics needs. Our deep domain knowledge of processes and best practices across the entire BFSI spectrum enables us to offer innovative solutions that aid decision-making across CIB, commercial and retail banking, cards, asset management, and insurance. Our proprietary technology platform combined with deep business domain knowledge helps us deliver best-in-class solutions across all key functional areas, including risk management, sales and marketing, financial control and reporting, regulatory compliance, and governance.

The year saw increased demand for our risk solution products like RAM, Early Warning System (EWS) and regulatory reporting solution (ADF - Automated Data Flow). Demand from both public and private FIs has been strong. However, we are cautiously optimistic since implementation challenges and timelines are a concern.

In the overseas markets, we increased collaboration efforts with S&P to leverage its client franchise and offer combined solutions synching its risk scorecard with our technology platform.

In response to the need for digitisation of risk assessment and lending processes, we incorporated more digital and analytical components into our technology agenda.

We successfully implemented our ECL offering (under the new International Financial Reporting Standards, or IFRS regime) at seven FIs in India and overseas.

We continue to invest in our technological capabilities and launched our new-age RAM solution in August 2019. We also continue to leverage our proprietary analytics platform, Fulkrum, for hosting innovations in our solutions.

Analysis of consolidated financial performance and result of operations

Consolidated financial statements include financial statements of CRISIL Ltd combined with its wholly owned subsidiaries ('Group'). Subsidiaries are entities controlled by the Company.

Financial statements of the Group and its subsidiaries have been combined on a line by line basis by adding the book values of like items – assets, liabilities, income, and expenses – after duly eliminating intra-group balances and transactions, and the resulting gains/ losses.

Consolidated financial statements have been prepared in accordance with Indian Accounting Standards (Ind AS) notified under the Companies (Indian Accounting Standards) Rules, 2015, read along with Section 133 of the Companies Act, 2013, (the 'Act') and other relevant provisions of the Act. Financial statements have been prepared under historical cost convention on an accrual basis except for certain financial instruments, which are measured at fair value at the end of each reporting period. Management accepts responsibility for the integrity and objectivity of financial statements as well as for various estimates and judgment used therein.

Securities and Exchange Board of India (SEBI) notifications dated May 30, 2018 and September 19, 2018, under the SEBI (Credit Rating Agencies) Regulations, 1999, have mandated segregation of Ratings and Non-Ratings businesses of Credit Rating Agencies. Pursuant to, and in order to comply with these notifications, CRISIL's Board of Directors approved transfer of the Ratings business to CRISIL Ratings Limited, (incorporated on June 3, 2019), a wholly owned subsidiary of CRISIL Limited. This transfer would be undertaken through a 'Scheme of arrangement in terms of Section 230 to 232 of the Companies Act, 2013' ('Scheme') to be approved by the Stock Exchanges and the National Company Law Tribunal (NCLT). Having received the requisite approvals from the Stock Exchanges, the Company has filed the Scheme with NCLT on October 25, 2019. NCLT has admitted the Scheme and has ordered convening of shareholders' meetings for approving the Scheme.

On December 19, 2019, CRISIL Irevna US LLC, a subsidiary company has entered into a definitive agreement to acquire 100% of the equity share capital of Greenwich Associates LLC ('Greenwich') and its subsidiaries, a leading provider of proprietary benchmarking data, analytics and qualitative, actionable insights that helps financial services firms worldwide measure and improve business performance. The acquisition will complement CRISIL's existing portfolio of products and expand offerings to new segments across financial services including commercial banks and asset and wealth managers.

The consolidated financial performance and result of operations are relevant for understanding CRISIL's performance.

A. Financial performance

1. Property, plant, equipment, and intangible assets

The Group's investments in property, plant, and equipment represent the cost of buildings, leasehold improvements, computers, office equipment, furniture, fixtures, and vehicles. Property, plant, and equipment are measured at cost less accumulated depreciation and impairment losses, if any.

The Group's intangible assets – software, customer relationship, technology, database, tradename, and platform – are stated at cost of acquisition or construction less accumulated amortisation and impairment losses, if any. The estimated useful lives of intangible assets and the amortisation period are reviewed at the end of each financial year.

During the year, the Group capitalised Rupees 25.49 crore to its gross block and deducted Rupees 7.81 crore from the gross block on disposal of various assets. Capitalised assets include office equipment, computers, software, and leasehold improvements to support business expansion and provide for replacement of the existing assets.

The Group expects to fund its investments in fixed assets and infrastructure from internal accruals and liquid assets.

At the end of the year, the Group's investments in property, plant, equipment, and intangible assets were as follows:

(Rupees in crore)

Details	As on December 31,		Growth %
	2019	2018	
Carrying value			
Property, plant, equipment, and intangible assets	238.35	219.91	8
Less accumulated depreciation	178.08	147.23	21
Net block	60.27	72.68	(17)
Depreciation as a % of total income	2%	2%	
Accumulated depreciation as % of gross block	75%	67%	

2. Goodwill on consolidation

Goodwill on consolidation represents excess of purchase consideration over the net asset value of acquired subsidiaries on the date of such acquisition. Goodwill is tested for impairment annually or more frequently, if there are indications of impairment. The growth in goodwill is due to translation difference.

3. Financial assets

A. Investments and treasury: The Group's investments and treasury comprise non-current equity investments, current investments, cash and bank balances, and fixed deposits.

- a. Equity investments:** All equity investments (quoted and unquoted) are measured at Fair Value Through Other Comprehensive Income (FVTOCI).
- b. Current investments and treasury:** The Group's investments in mutual funds are classified as Fair Value Through Profit or Loss (FVTPL). The Group's treasury was Rupees 595.35 crore as on December 31, 2019, as against Rupees 386.18 crore in the previous year.

(Rupees in crore)

Details	As on December 31,				Growth %
	2019	%	2018	%	
Cash and bank balance	113.78	19	90.49	24	26
Fixed deposits	229.32	39	112.66	29	104
Mutual funds	252.25	42	183.03	47	38
Total	595.35	100	386.18	100	

Cash and bank balance include Indian and overseas bank accounts. The latter is maintained to meet the expenditure of overseas operations. The Group's treasury policy calls for investing surplus in combination of fixed deposits with scheduled banks and debt mutual funds.

The Group maintains adequate amount of liquidity/treasury to meet strategic and growth objectives. It has ensured a balance between earning adequate returns on liquidity/treasury assets and the need to cover financial and business risks.

The Group actively monitors its treasury portfolio and has a policy in place for investing surplus funds. Appropriate limits and controls ensure investments are made as per the policy.

B. Loans

Loans comprise security deposits and loans to staff. Loans were Rupees 41.43 crore as on December 31, 2019, as against Rupees 45.19 crore in the previous year.

C. Trade receivables

Trade receivables at gross levels were Rupees 223.12 crore as on December 31, 2019, compared with Rupees 324.70 crore in the previous year. Trade receivables constituted 13% of operating revenue compared with 19% of operating revenue during the previous year .

The break-up of debtors relating to the segment is tabled below:

(Rupees in crore)

Segment	As on December 31,				Growth %
	2019		2018		
	Amount	%	Amount	%	
Ratings	47.91	21	62.28	19	(23)
Research	133.97	60	203.12	63	(34)
Advisory	41.24	19	59.31	18	(30)
Total	223.12	100	324.70	100	

The Group believes that the outstanding trade receivables are recoverable and it has adequate provision for bad debt. Provision for doubtful debt balance was Rupees 23.75 crore as on December 31, 2019, as against Rupees 39.87 crore in the previous year. Provision for bad debt as a percentage of revenue for the year ended December 31, 2019, was 1 % compared with 2% in the previous year.

D. Other financial assets

Other financial assets comprise unbilled receivables, accrued interest, and forward contract receivable. Other financial assets amounted to Rupees 79.88 crore for the year ended December 31, 2019, compared with Rupees 94.49 crore in the previous year.

4. Deferred tax assets and advance taxes

Deferred tax assets and liability primarily comprise deferred taxes on property, plant, equipment, leave encashment, accrued compensation to employees, gratuity, fair valuation of quoted/unquoted investments, business combination, provision for bad debt, and deferred initial rating fees. The Group's net deferred tax assets totaled Rupees 42.59 crore as on December 31, 2019, as against Rupees 56.76 crore in the previous year. Deferred tax assets are recognised only to the extent that there is reasonable certainty that sufficient future taxable income will be available against which such deferred tax assets can be realised.

The net advance income tax asset was Rupees 58.66 crore as on December 31, 2019, compared with Rupees 44.29 crore in the previous year.

5. Other assets

Other assets mainly comprise advances to vendors, accrued revenue, prepaid expenses, and tax credit receivable .

6. Equity share capital

The Company's authorised capital is Rupees 10 crore, comprising 100,000,000 equity shares of Rupee 1 per share. During the year, the company issued and allotted 188,544 equity shares to eligible employees on exercise of options granted under Employee Stock Option Scheme (ESOP) 2014. Consequently, the company issued, subscribed and paid-up capital increased from 72,115,782 to 72,304,326 equity shares of Rupee 1 each.

7. Other equity

Other equity was Rupees 1,164.69 crore as on December 31, 2019, as against Rupees 1,129.04 crore in the corresponding period of the previous year. Other equity comprises reserves & surplus, and other comprehensive income (OCI).

8. Financial liabilities

A. Trade payables

Trade payables as on December 31, 2019, were Rupees 75.46 crore as against Rupees 64.77 crore in the previous year. Trade payables include amount payable to vendors for the supply of goods and services.

B. Other financial liabilities

Other financial liabilities, which include dues to employees, unclaimed dividend and miscellaneous liabilities were Rupees 168.17 crore as on December 31, 2019, as against Rupees 167.13 crore in the previous year.

9. Provisions and other liabilities

A. Provision for employee benefits

The overall liability was Rupees 81.27 crore as on December 31, 2019, compared with Rupees 77.11 crore in the previous year. The increase in the current year is in line with merit increase.

B. Others

Other non-financial liabilities include unearned revenue and statutory liabilities. Unearned revenue represents fee received in advance for which services have not been rendered. Other liabilities were Rupees 173.99 crore as against Rupees 174.20 crore in the previous year.

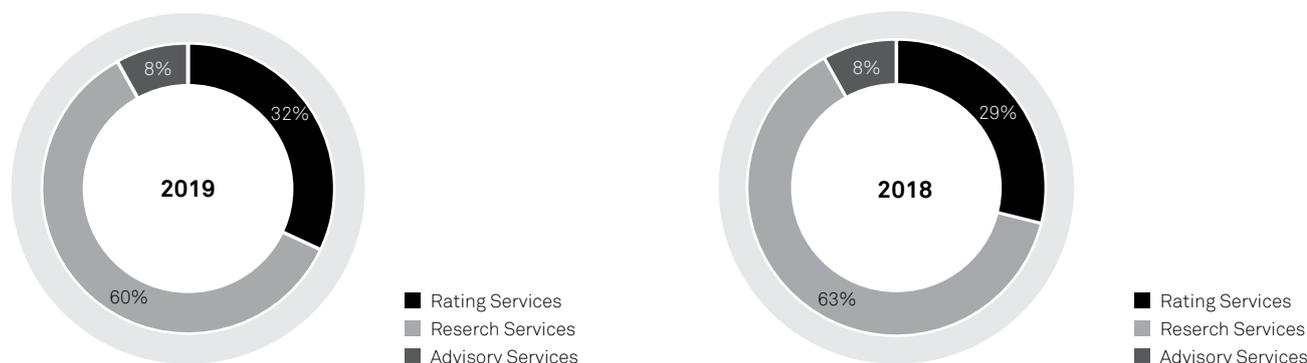
B. Results of operations

The summary of the operating performance is given below:

(Rupees in crore)

Particulars	Year-ended December 31,			
	2019	% of revenue	2018	% of revenue
Income from operations	1,731.72	96	1,748.49	96
Other income	72.84	4	73.41	4
Total income	1,804.56	100	1,821.90	100
Expenses				
Personnel expenses	877.56	49	887.36	49
Finance cost	0.23	0	2.23	0
Depreciation	36.86	2	42.82	2
Other expenses	398.32	22	389.90	21
Total expenses	1,312.97	73	1,322.31	73
Profit before tax	491.59	27	499.59	27
Tax expense	147.64	8	136.49	7
Profit after tax	343.95	19	363.10	20

Segmental revenue analysis



Segmental results

(Rupees in crore)

Segmental details	Year ended December 31,		Growth %
	2019	2018	
Revenue			
Ratings	544.81	507.30	7
Research	1,044.40	1,106.01	(6)
Advisory	142.51	135.18	5
Total	1,731.72	1,748.49	
Segmental profit			
Ratings	219.54	184.17	19
Research	233.68	326.44	(28)
Advisory	12.73	(8.09)	257
Total	465.95	502.52	

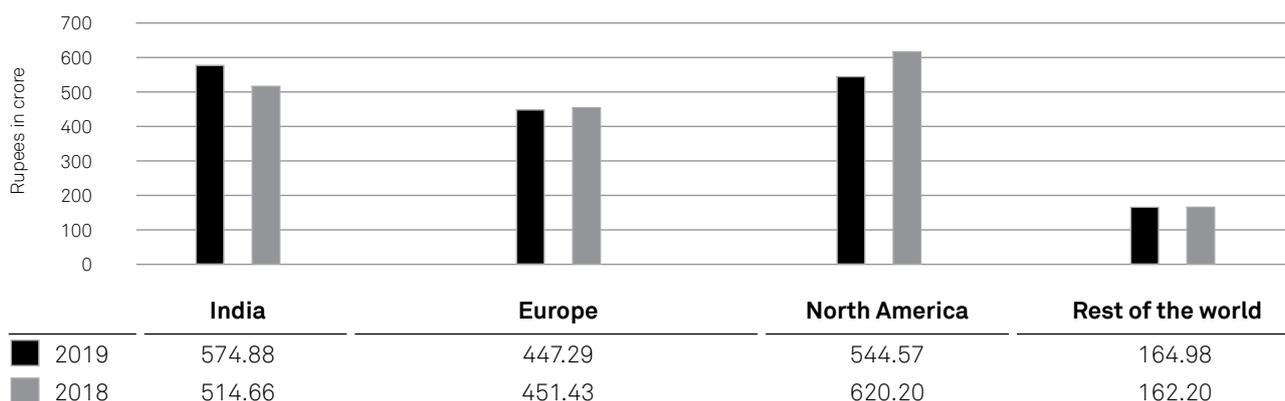
CRISIL Ratings revenue showed healthy growth on the back of ratings quality, addition of large corporate clients, increase in securitisation mandates, and new offerings such as Independent Credit Evaluation (ICE). The Global Analytical Center (GAC) increased coverage for S&P Global Ratings in the areas of new analytics such as ESG, and sharpened focus on automation and optimisation by leveraging new technologies to streamline operations in data and analytics.

Research segment performance was led by Coalition, which saw robust traction in client and competitor analytics. India Research business saw growth in funds and fixed-income research by leveraging its proprietary data and analytics platform Quantix for asset and wealth managers, and institutional investors. The segment's performance was affected by changing demand in the risk and analytics space, with the global financial services sector preparing itself for the next wave of regulations.

Advisory segment grew on the back of new wins in the credit risk, regulatory reporting and business analytics space in addition to new mandates from government and multilaterals in the infrastructure space.

Revenue by geography

Of the total revenue for the year ended December 31, 2019, exports contributed 67% and domestic services 33%.



Other income (net)

Other income was Rupees 72.84 crore as on December 31, 2019, compared with Rupees 73.41 crore in the previous year.

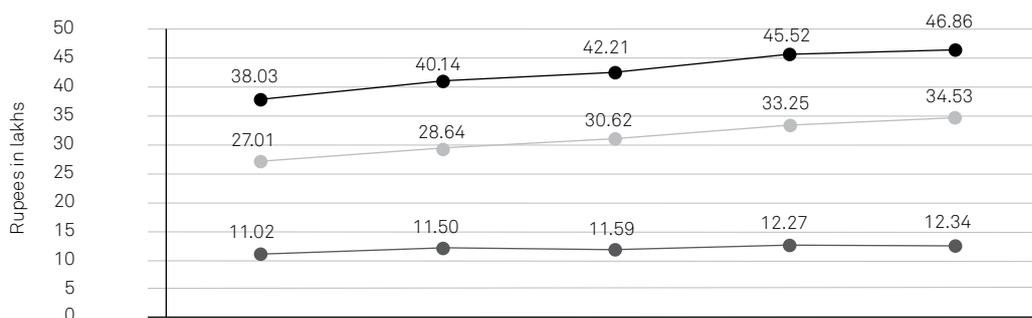
Expense analysis

Total expenses in the year was Rupees 1,312.97 crore as against Rupees 1,322.31 crore in the previous year. The composition of expenses is given below:

Particulars	(Rupees in crore)	
	Year ended December 31,	
	2019	2018
Personnel expenses	877.56	887.36
Finance cost	0.23	2.23
Depreciation	36.86	42.82
Other expenses	398.32	389.90
Total Expenses	1,312.97	1,322.31

Overall costs were lower than previous year due to strong control on costs

Revenue and profit per employee for the past five years



	2015	2016	2017	2018	2019
● Ope. Rev per employee	38.03	40.14	42.21	45.52	46.86
● Ope. Expense per employee	27.01	28.64	30.62	33.25	34.53
● Operating Profit per employee	11.02	11.50	11.59	12.27	12.34

— Ope. Rev per employee — Ope. Expense per employee — Operating Profit per employee

Note: Figures for 2019, 2018, 2017 and 2016 are as per Ind AS and for 2015 is as per IGAAP.

Key Ratios

Particulars	2019	2018	2017	2016	2015
Personnel expenses/revenue (%)	49	49	50	50	49
Operating and other expenses/revenue (%)	73	73	74	73	71
Operating profit (PBIDT)/revenue (%)	29	30	29	31	31
Depreciation and amortisation/revenue (%)	2	2	3	3	3
Tax/revenue (%)	8	7	8	9	8
PAT/revenue (%)	19	20	18	18	20
Debtor turnover ratio	6	6	7	7	8
Current ratio	2	2	2	2	2
Operating profit margin(%)	26	27	27	29	29
Net profit margin(%)	19	20	18	18	20
Return on networth (%)	30	33	30	32	33

Note: Figures for 2019, 2018, 2017 and 2016 are as per Ind AS and 2015 is as per IGAAP.

Operating revenue per employee increased 3% on-year. Operating profit per employee increased to Rupees 12.34 lakhs, which was achieved through increased productivity and effective utilisation of resources.

Analysis of CRISIL's standalone financial performance and result of operations

A. Financial performance

1. Property, plant, equipment, and intangible assets

The Company's investments in property, plant, and equipment represent cost of buildings, leasehold improvements, computers, software, office equipment, furniture, fixtures, and vehicles. Property, plant, equipment, and intangible assets are measured at cost less accumulated depreciation and impairment losses, if any.

During the year, the Company capitalised Rupees 17.56 crore to its gross block and deducted Rupees 5.50 crore from the gross block on disposal of various assets. Property, plant, and equipment capitalised during the year include office equipment, computers, software, and leasehold improvements to support expansion of the business and provide for replacement of the existing assets.

Depreciation as a percentage of total income remained constant at 2% in the current year. The Company expects to fund its investments in fixed assets and infrastructure from internal accruals and liquid assets.

At the end of the year, the Company's investments in net property, plant, equipment, and intangible assets were Rupees 39.16 crore as against Rupees 48.72 crore in the previous year.

Category	(Rupees in crore)				
	As on December 31,				Growth %
	2019	%	2018	%	
Cash and bank balance	67.27	21	47.74	20	41
Fixed deposit	5.43	2	1.39	1	291
Mutual funds	252.25	77	183.03	79	38
Total	324.95	100	232.16	100	

The Company's treasury policy calls for investing surplus in a combination of fixed deposits with scheduled banks and debt mutual funds. The Company's treasury position is healthy.

B. Loans

Loans comprise security deposits and loans to subsidiaries and staff. As on December 31, 2019, the outstanding amount totaled Rupees 39.65 crore compared with Rupees 45.77 crore in the previous year.

C. Trade receivables

Trade receivables at gross levels were 148.95 crore as on December 31, 2019, compared with Rupees 182.37 crore in the previous year. Trade receivables as a percentage of operating revenue is at 13% compared to 15% in previous year.

The Company believes that the outstanding trade receivables are recoverable and it has adequate provision for bad debt. Provision for doubtful debt balance was Rupees 10.08 crore

2. Financial assets

A. Investments and treasury: The Company's investments and treasury comprise non-current equity investments, current investments, cash and bank balances, and fixed deposits.

a. Equity investments

All equity investments (quoted and unquoted, other than investment in subsidiaries) are measured at Fair Value Through OCI (FVTOCI).

Investments in subsidiaries are measured at cost. As on December 31, 2019, the cost of investment in subsidiaries stood at Rupees 182.93 crore.

b. Current investments and treasury

The Company's investments in mutual funds are classified as Fair Value Through Profit and Loss (FVTPL). The Company's treasury totaled Rupees 324.95 crore as on December 31, 2019, as against Rupees 232.16 crore in the previous year.

Cash and bank balance remained constant at 21% of the treasury as on December 31, 2019. The treasury position is after considering dividend payouts of Rupees 251.62 crore.

as on December 31, 2019, as against Rupees 17.55 crore in the previous year. Provision for bad debt as a percentage of revenue for the year ended December 31, 2019, remained constant at 1% in the year.

D. Other financial assets

Other financial assets comprise advances recoverable in cash/kind, accrued revenue, accrued interest, and forward contract receivable. Other financial assets for the year ended December 31, 2019, amounted to Rupees 51.77 crore compared with Rupees 33.21 crore in the previous year.

3. Deferred tax assets and advance taxes

Deferred tax assets and liability primarily comprise deferred taxes on property, plant, equipment, leave encashment, accrued compensation to employees,

gratuity, fair valuation of quoted/unquoted investments, provision for bad debt, and unearned revenue. The Company's net deferred tax assets were valued at Rupees 28.36 crore as on December 31, 2019, as against Rupees 45.40 crore in the previous year. Deferred tax assets are recognised only to the extent that there is reasonable certainty sufficient future taxable income will be available against which such deferred tax assets can be realised.

Advance income tax asset was Rupees 48.15 crore as on December 31, 2019, compared with Rupees 36.18 crore in the previous year.

4. Other assets

Other assets mainly comprise prepaid expenses, assets held for sale, and tax credit receivable.

5. Equity share capital

The Company's authorised capital is Rupees 10 crore, comprising 100,000,000 equity shares of Rupee 1 per share. During the year, the Company issued and allotted 188,544 equity shares to eligible employees on exercise of options granted under ESOP 2014. Consequently, the issued, subscribed and paid-up capital of the Company increased from 72,115,782 equity shares of Rupee 1 each to 72,304,326 equity shares of Rupee 1 each.

6. Other equity

Other equity comprises reserves, surplus and OCI. It was Rupees 751.52 crore as on December 31, 2019, as against Rupees 801.72 crore in the corresponding previous

period. This was after considering the final and interim dividend payouts amounting to Rupees 251.62 crore during the year ended December 31, 2019.

7. Financial liabilities

A. Trade payables

Trade payables amounted to Rupees 67.58 crore as on December 31, 2019, as against Rupees 52.07 crore in the previous year. Trade payables include amount payable to vendors for supply of goods and services.

B. Other financial liabilities

Other financial liabilities, which include unclaimed dividend, book overdraft, dues to employees and sundry deposit payable, were Rupees 85.90 crore as on December 31, 2019, as against Rupees 76.03 crore in the preceding year.

8. Provisions

Provisions comprise provisions for employee benefits. The overall liability was Rupees 70.45 crore as on December 31, 2019, as against Rupees 67.79 crore at the end of the previous year. Growth in the current year is in line with merit increase.

9. Other liabilities

Other liabilities mainly represent payables on account of withholding tax, Goods and Service tax, other duties, and unearned revenue. Unearned revenue represents fee received in advance or advance billing for which services have not been rendered.

B. Results of operations

The summary of standalone operating performance is given below:

(Rupees in crore)

Particulars	Year ended December 31,			
	2019	% of revenue	2018	% of revenue
Income from operations	1,178.68	90	1,181.99	93
Other income	129.04	10	88.87	7
Total income	1,307.72	100	1,270.86	100
Expenses				
Personnel expenses	517.04	39	504.19	40
Finance cost	-	-	1.18	-
Depreciation	25.63	2	28.67	2
Other expenses	387.21	30	356.25	28
Operating expenses	929.88	71	890.29	70
Profit before tax	377.84	29	380.57	30
Tax expense	111.55	9	103.04	8
Profit after tax	266.29	20	277.53	22

Revenue analysis

Other income (net)

Other income during the year increased to Rupees 129.04 crore from Rupees 88.87 crore in the previous year. This was mainly due to dividend on investments.

Expense analysis

The total expenses for the year ended December 31, 2019 was Rupees 929.88 crore as against Rupees 890.29 crore during the corresponding previous year. Growth in other expenses was mainly on account of professional fees that are linked to revenue.

C. Risk management

The Company has a robust risk management framework in place with overall governance and oversight from the Risk Management Committee of the Board and oversight from Audit Committee and Board of Directors. Risk Management policy of CRISIL clearly outlines the key accountabilities and responsibilities of managing risks at CRISIL. CRISIL has a balanced approach to risk management by mitigating risks to an acceptable level within its tolerances and protecting CRISIL's reputation and brand while supporting the achievement of operational and strategic goals and objectives. Risk assessment is conducted periodically and the Company has a mechanism to identify, assess, mitigate and monitor various risks to key business objectives. The Internal Risk Management Committee, comprising senior members of the leadership team, provides governance and oversight on the process. The Company has a specialised role of 'Chief Risk Officer' to drive the risk management agenda.

Risk assessment is a combination of bottom-up and strategic view of key risks facing the business across all segments and functions. All the risks are reviewed and assigned probability of occurrence and potential impact (financial and non-financial) based on deliberations with business leaders and independent assessment. Mitigation plans are designed, implemented and monitored on a quarterly basis.

Key business risks and mitigation strategy are highlighted below.

1. Business risks

To mitigate the risk arising from high dependence on any one business for revenues, the Company has adopted the strategy of diversifying into new products/services and different business segments. To address the risk of dependence on a few large clients and a few sectors in the business segments, the Company has also actively sought to diversify its client base and industry segments.

The Company strives to add value to its clients by providing services of a superior quality, introducing relevant tools, platforms, and products, and by maintaining a robust franchise with investors and end-users, to mitigate the risk arising from slowdown in global economy and competitive pricing. Repeat business from large clients in the research segment, nevertheless, continues to contribute significantly to revenue.

The Company carries reputation risk for services rendered, especially in the rating business. CRISIL's rating process is designed to ensure that all ratings are based on the highest standards of independence and analytical rigour.

2. Foreign exchange earning risk

CRISIL foreign currency revenue earnings are significant and any appreciation or depreciation in the rupee can

have a significant impact on revenue and profitability. The Company has in place a well-defined foreign exchange management policy and process designed to minimise the impact of volatility in foreign exchange fluctuations on earnings. We evaluate exchange rate exposure arising from these transactions and enter into foreign exchange hedging contracts to mitigate the risks arising out of movement in the rupee. The foreign exchange management programme covers a large portion of projected future revenue over a 12-month period and is restricted to standard forward contracts and options.

Appropriate internal controls are in place for monitoring.

3. Policy risk

In the past two to three years, Securities and Exchange Board of India (SEBI), the regulator for credit rating agencies (CRA's) in India, has issued guidelines to mandate more disclosures by CRA's, ensure greater discipline in the rating processes, and set enhanced norms for functioning of rating committees. Further, it has defined the process to be adopted in the event of non-cooperation by issuers, introduced independent member(s) in the Rating Committees for appeal cases, initiated segregation of legal entity for regulated and non-regulated businesses, introduced and standardized probability of default (PD) benchmarks, added a new subscript to the ratings symbols for credit enhanced (CE) ratings, strengthened the board composition of CRA's, and introduced a new role of a Chief Ratings Officer. SEBI has also raised the bar on the eligibility to set up a CRA and stipulated greater disclosure for issuers on their financial performance. Overall, the revisions in guidelines will improve transparency of the credit rating process and enhance standards of the CRA industry. At the same time, the recent guidelines increase the operational intensity of the rating process. CRISIL continues to focus on leveraging technology to build appropriate controls and monitoring tools for safeguarding the rating process and facilitating necessary disclosures. Further, the Company has made significant progress towards its plan of legal entity restructuring.

The policy announcements for development of the bond market have been supportive in recent years. The steps towards nudging large corporates to raise 25% of their funding needs from the bond market, persuading insurance and pension regulators to accord recognition to corporate bonds rated in 'A category', recently announced plan to allow netting off financial contracts for Credit Default Swaps (CDS), and ongoing implementation of insolvency and bankruptcy code (IBC) will structurally enhance the bond market's role in India's financing landscape over time. As a part of its franchise strategy, CRISIL continues to highlight the critical role played by the bond market in the financial system, engage with the regulators and policy makers to facilitate development of the bond market, conduct regular events on the theme of bond markets, and invest significant efforts towards innovations that have the potential to expand the role of the bond market.

4. People risk

CRISIL's key assets are its employees and in a highly competitive market, attrition continues to be one of the key challenges. CRISIL continues to accord top priority to managing employee attrition by formulating talent retention programme and offering a competitive salary and growth path for talented individuals.

5. Legal and statutory risks

CRISIL is subject to national and regional laws and regulations in such diverse areas as products, trademarks, copyright, competition, the environment, corporate governance, listing and disclosure, employment, and taxes. Failure to comply with laws and regulations could expose CRISIL to civil and/or criminal actions leading to damages, fines and criminal sanctions against us and/or our employees with possible consequences for our corporate reputation. Changes to laws and regulations could have a material impact on the cost of doing business. CRISIL is committed to complying with the laws and regulations of the countries in which it operates. In specialist areas the relevant teams at global, regional or local levels are responsible for setting detailed standards and ensuring that all employees are aware of and comply with regulations and laws relevant to their roles. Our legal and regulatory specialists are heavily involved in monitoring and reviewing our practices to provide reasonable assurance that we remain aware of and in line with all relevant laws and legal obligations. Our tax principles provide overarching governance and our tax experts set out the controls established to assess and monitor tax risk for direct and indirect taxes. We monitor proposed changes in taxation legislation and ensure these are taken into account when we consider our future business plans.

Legal and compliance functions seek to mitigate legal risks with support from other departments. These functions aim to ensure that laws and regulations are observed, to react appropriately to all impending legislative changes or new court rulings, to attend to legal disputes and litigation, and provide legally appropriate solutions for transactions and business processes.

6. Technology-related risks

Information technology (IT) is core to the operations of all CRISIL businesses. All technology services are governed through comprehensive policies and processes. These processes allow information access to personnel within the Company based on identified roles. Audits are

conducted regularly to identify areas of vulnerability and to identify actions that mitigates the operational risks. ISO certification of key CRISIL offices is conducted to ensure compliance with policies related to IT and management system.

Inadvertent or deliberate sharing of client confidential data or CRISIL proprietary information by staff is an important risk. The Company has put in place a 'Data Leakage Prevention' process. The Information security team acts as a second line of defense in driving the agenda pertaining to information security trainings, implementing tools to strengthen information security posture and evaluate areas of vulnerabilities, and improve the controls to prevent/ detect/ neutralise malicious network penetration (cyber-attack). Incidents of cyber-attacks globally as well as in India have increased. The Company continues to evaluate and invest in additional mitigation plans through tools and infrastructure and enhanced monitoring.

CRISIL's business processes are automated through bespoke business applications that capture and maintain information regarding business processes, client agreements, reports generated and assignments delivered, thus creating an adequate database for our knowledge. The technology used by the Company at all locations provides for redundancy and disaster recovery. For critical business processes, the business teams have defined a business continuity plan and have tested it with the help of the IT team. The technology department keeps abreast of the changes, and suitably undertakes projects for technology upgradation to keep the infrastructure current and to provide for redundancy.

7. Internal audit and internal financial controls system

The Audit Committee provides oversight of the Company's internal audit process. The Audit Committee reviews and concurs in the appointment, replacement, performance, and compensation of the Company's internal auditor and approves internal audit's annual audit plan and budget. The Audit Committee also receives regular updates on the audit plan's status and results including reports issued by the internal auditor and the status of management's corrective actions.

Pursuant to the requirement of amendments in Companies Act 2013, the Company has institutionalised internal financial controls system. Accordingly, key risks and controls across all businesses and functions are identified, and gaps, if any, are remediated.