Cash-Flow Measures in Corporate Analysis

Cash Flow and Ratio Computations

Special Report

This report updates and replaces *Cash-Flow Measures in Corporate Analysis*, dated 12 September 2012.

How Ind-Ra Computes and Works With Cash-Flow Measures

Cash is King. An emphasis on cash flow is an important part of India Ratings and Research's (Ind-Ra) corporate analysis. Cash flow is the best available measure of the cash available to an entity from its business operations. It is generally acknowledged to be of greater importance in fixed-income analysis than accruals- or fair-value based measures.

But How Many Kings? There are many cash flow measures (CFMs) that can be applied in corporate analysis, most of which have a variety of computations. On its own, no one CFM is more analytically predictive than all others at communicating the financial position of a rated entity. As a result, Ind-Ra analysts balance the signals from a variety of cash flow and other financial measures.

One Measure per Realm. As the disclosure made by individual issuers differs significantly, it is necessary to have a framework for CFMs with which to compare issuers. The basic principle, which mirrors that of the cash flow statement, is that of a chain of CFMs that measures the CFM position of the issuer at different levels – operational before working capital, operational after working capital and cash flow after capital expenditure.

The Cash-Flow Chain

Funds From Operations (post-interest, post-tax, pre working capital): Funds from operations (FFO) is measured after tax and after interest paid and received, and after preference dividend paid, but before inflows or outflows related to working capital. Ind-Ra's computation also subtracts or adds back an amount to exclude non-core or non-operational cash in- or outflow. FFO is an important CFM for interest cover by Ind-Ra – in interest coverage ratios, interest paid is added back to the numerator.

Cash from Operations (post-interest, post-tax, post working capital): Cash from operations (CFO) represents the cash flow available from core operations after all payments identified by the company as for ongoing operational requirements, interest, preference dividends and tax. Ind-Ra's computation further subtracts or adds back an amount to exclude non-core or non-operational cash in or outflow.

CFO is also measured before reinvestment in the business through capital expenditure, before receipts from asset disposals, before any acquisitions or business divestment and before the servicing of equity with dividends, or the buyback or issuance of equity.

Free Cash Flow (post-interest, tax, working capital, capex and dividends): Free cash flow (FCF) is the third and final key CFM in the chain. It measures the cash from operations, after capex, and after non-recurring or non-operational expenditure. It also measures the cash flow generated before account is taken of business acquisitions, business divestments and any decision to issue or buy back equity, or make a special dividend.

EBITDA – A Cash Flow Proxy

In addition, Ind-Ra uses a computation of EBITDAR, which it refers to as operating EBITDAR, as a further measure of profitability. While EBITDAR is not strictly speaking a cash flow measure, it is the most broadly used global proxy for cash flow, notably in segmental reporting.

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How Are the CFMs Calculated?

Figure 1 portrays a company, ABC Corp., for which a number of assumptions have been made to create a worked example.

Some differences could exist in the level of detail evident on the face of the cash flow statement. The sample is constructed to replicate most of the disclosures on the face of the cash flow statement which readers will face.

Readers may also get a clearer overview by reading Figure 1 alongside Figure 3, which provides ABC Corp.'s income statement.

Figure 1
ABC Corp. Cash-Flow Statements

Common units		
Profit before tax/extraordinary item	**3,110**	
Adjustments for: depreciation & amortisation	450	
Gain on sale of facility	-35	
Investment income	-255	
Interest expense	400	
Operating profit before working capital changes	3,670	
Increase in trade and other receivables	-500	
Decrease in inventories	1,050	❶
Decrease in trade payables	-1,740	
Cash generated from operations	2,480	
Interest paid	-270	
Income taxes paid	-900	
Cash flow before extraordinary item	1,580	
Proceeds from insurance settlement	180	
Net cash from operating activities	**1,490**	❷
Cash flows from investing activities		
Acquisition of x net of cash acquired	-550	
Purchase of property, plant & equipment	-350	
Proceeds from sale of equipment	20	
Interest received	30	
Dividends received	200	
Net cash used in investing activities	**-650**	
Cash flows from financing activities		
Proceeds from issuance of share capital	250	
Proceeds from long-term borrowings	250	
Payment of finance lease liabilities	-90	
Dividends paid	-1,200	
Net cash used in financing activities	**-790**	

For illustrative purposes only
Source: Ind-Ra

Figure 2 describes how the numbers in Figure 1 are used to calculate CFMs. Two sets of CFMs have been presented, based on the inclusion or exclusion of associate dividends. Figure 2 shows the impact on CFMs for both cases: one, where the analyst decides that the associate income represents the kind of stable, annuity flow, core to the rated entity's business strategy, which can be included in our key CFMs, and the other case where it is excluded.

- Associate dividends included only where seen as stable, annuity income stream

Ind-Ra's financial summaries will usually publish only one CFO measure (excluding or including associate dividends), although committee papers and research reports may feature alternative computations where this is felt to be an analytically significant point.

Computing CFMs – A Practical Example

CFO, as used by Ind-Ra, is computed beginning with the "headline" cash flow number most commonly found at the position marked ❶ on Figure 1. This amount will generally require further adjustment as noted below.

Applicable Criteria

Corporate Rating Methodology

- All readily identifiable working-capital categories included in working back from CFO to FFO
- Recurring exceptional charges may be deemed unexceptional charges by Ind-Ra

FFO is then computed by subtracting working capital movements (i.e. where working capital movements are negative, they would be added back). These movements are highlighted in Figure 1 by marker ❷. As a result, the choice of working capital items is central to the quality of this measure. Ind-Ra includes all readily identifiable movements in working capital, including numbers lumped into broad, amorphous categories such as “Other”, in its computation of FFO. Where an “Other” category is arithmetically material, the analyst pursues a more detailed explanation.

The example in Figures 1 and 2 shows adjustments to CFO (and therefore FFO) to exclude a non-recurring insurance settlement. CFO and FFO are measured before exceptional costs or income, to try and isolate an underlying cash generation profile for the issuer. Where the issuer repeatedly reports exceptional charges/income, the analyst may deem certain or all exceptional charges or income to be unexceptional and reintegrate them within CFO and FFO as an operational cost line.

Figure 2

ABC Corp. Cash Flow Statements and Ind-Ra CFMs

	Exc. Associates for CFO/FFO	Exc. Associates for CFO/FFO
Step 1: Compute CFO		
‘Headline’ Cash flow[a] ❶	1,490	1,490
Minus insurance settlement	-180	-180
Minus affiliate dividends	-	-
Plus affiliate dividends	-	200
Plus interest received	30	30
CFO	**1,340**	**1,340**
Step 2: Add back working capital to CFO to derive FFO		
CFO	**1,340**	**1,540**
Minus working capital ❷	-1,190	-1,190
FFO	**2,530**	**2,730**
Step 3: Use CFO to Derive FCF		
CFO	**1,340**	**1,540**
Minus capital expenditures	-350	-350
Plus non-recurr. cash flow	180	180
Plus affiliate dividends	200	-
Minus corporate dividends	-1,200	-1,200
FCF	**170**	**170**

[a] The description applied to this line in the cash flow statement will vary, but typically resembles “Net Cash From/provided by Operating Activities”
Source: Ind-Ra

- CFO/FFO may be distorted by interest received

In any accounting presentation, where interest received is a material amount relative to CFO or FFO, and the analyst feels that this unduly flatters the cash flow generation ability of the entity, interest received may be manually excluded from CFO and FFO and added to the non-operational income adjustment. The adjustment will be made on a cash basis – as an example, for ABC Corp., cash interest received and interest income are identical; were cash interest received to be 300, and represent a material portion of CFO/FFO, the analyst may opt to manually exclude all or some interest received from CFO and FFO measures.

Where, for the computation of ratios, cash interest and tax numbers are not available, Ind-Ra analysts can choose either to estimate a cash payment, based on expectations of effective taxation rates, deferred tax movements and debt coupons, or substitute the accrual figure for both, if no material difference is expected.

- FCF is computed after dividends paid – though flexible, dividends are an "ordinary-course-of-business" expense

The third step is to compute FCF, in which associate dividends and non-operational cash flow items are included. Note that FCF is thus generally neutral as to the decision to include or exclude associate dividends. Ind-Ra measures FCF after the payment of ordinary and preferred dividends (preferred dividends are typically deducted together with interest paid at the FFO level). The computation acknowledges that ordinary dividend payments are an optional expense, and issuers will often choose to reduce a dividend if they experience a period of financial stress. The decision to deduct ordinary dividends from FCF is nonetheless designed to reflect the 'ordinary course of business' assumption that an issuer will usually attempt to maintain or increase dividend levels to ensure that both sides of its capital structure – debt and equity – are being adequately compensated.

Dividends paid to shareholders in joint venture (JV) subsidiaries typically represent unavoidable "leakage" in moving cash from those subsidiaries to the parent level and are therefore deducted before CFO and FFO.

The other main deduction taken before FCF – capital expenditure – will also generally have a high level of optionality, and in most cases can be cut during a period of financial pressure. Both elements are examined by analysts to confirm the extent of flexibility: whether the issuer relies upon access to equity markets, what proportion of its investment bill is mandatory versus growth or optional and so on. Ind-Ra's stress cases will usually examine a reduction or suspension of one or both of dividend expenditure and capital investment.

Other Profitability Measures

- EBITDAR the least cash-flow based but most widely reported measure
- More helpful in determining profitability than determining pure cash flow

Operating EBITDA/R

Given the increased use of fair-value by accounting standards, the resultant growing gap between income statement and cash flow statement figures, and the greater availability of cash flow statement numbers, Ind-Ra will be publishing more data using the above CFMs than the proxy measures favoured in the past, EBITDA/R. Ind-Ra has historically used a variation of EBITDA (earnings before interest, tax, depreciation and amortisation) to describe one of its standardised measures of profitability excluding non-cash charges.

Ind-Ra has also used EBITDAR (earnings before interest, tax, depreciation, amortization, and rental or lease expenditure) for companies with significant lease or rental obligations. This is designed to capture the servicing of lease financing, analogous to the treatment of other fixed charge funding obligations such as bank loans, bonds, commercial paper or fixed-coupon preferred equity. In addition, Ind-Ra has used proxies for FCF measures based on EBITDA (deducting interest paid, tax paid, working capital and capital expenditure).

EBITDA/R is, however, subject to a wide variety of computation methods – differently assessed from one issuer, investor and banker to another. Some basic EBITDA measures start from net income and simply add back depreciation, interest and taxes (as the acronym would imply). These measures capture non-operational receipts and expenses (gains and losses on asset sales, income from fixed-asset investments, revenue overstatement etc.), which in addition may not accurately reflect actual cash in- or outflows.

Other EBITDA/R measures (including that used by Ind-Ra) typically start with revenues and deduct operating expenditure excluding depreciation and amortisation and also segregate out non-recurring, non-operational or other non-cash items. This method also has limitations, particularly in the over- or under-recognition of revenue and in the capitalisation of costs. A carefully calculated revenue-based EBITDA/R can nonetheless enhance the quality of the analysis by identifying major areas of difference between the accruals/fair-value and cash-flow statement based measures of cash flow.

Computing EBITDA/R – A Practical Example

Figure 3 shows ABC Corp.'s income statement. Figure 4 breaks down Ind-Ra computation of EBITDA and EBITDAR. As with the CFMs above, there are two versions – one where associate dividends are excluded (the norm) and one where they are included.

Figure 3

ABC Corp. Income Statements

Revenues	**30,585**
Cost of goods sold	-18,570
Gross profit	**12,015**
Selling, general & admin. expense	-8,345
Depreciation & amortisation	-450
Operating profit	**3,220**
Gain on sale of facility	35
Interest expense	-400
Interest income	30
Income from operations before tax	**2,885**
Provision for income taxes	-1,250
Net income	**1,635**
Equity earnings from affiliates	225
Extraordinary item	180
Net income after extraordinary items	**2,040**
Reconciliation to ABC Corp.'s opening items in the cash flow statement above	
Add back taxation	-
Deduct extraordinary item	-
Opening item	**2,040**

For illustrative purposes only
Source: Ind-Ra

Ind-Ra's standardised method of computing operating EBITDAR begins with revenues and excludes non-recurring and non-operational items. Non-recurring items include restructuring costs, asset disposal losses or gains, insurance receipts etc. Non-operating income items typically include gains or losses on asset disposals, gains or losses from releasing provisions, lease rental income for non-property companies and similar items. Operating EBITDAR is also measured before interest income, other income from financial investments, and excludes profit or dividends from associates and affiliates. Where discontinued operations can be reliably split out from continuing operations at a consolidated level, they will be excluded.

Analysts are required to assume a level of rental expenditure which is long-term, either based on the contractual terms of the lease or the likely renewal of shorter term leases (for example, a retailer with short residual term leases on sites which Ind-Ra anticipates they will retain). Lease expenses are generally not disclosed on the face of the income statement, and the example for ABC assumes an annual lease expenditure of 1,000, of which the analyst estimates 70% represents long-term commitments.

Figure 4

ABC Corp. Operating EBITDA and Operating EBITDAR Measures

	Exc. Associates	Inc. Associates
Revenues/sales	30,585	30,585
Minus COGS/COS	-18,570	-18,570
Minus S,G & A	-8,345	-8,345
Plus affiliate dividends	-	200
Operating EBITDA	**3,670**	**3,870**
Plus long-term rentals[a]	700	700
Operating EBITDAR	**4,370**	**4,570**

[a] No figure disclosed in the income statement; figure of 1,000 taken from footnotes to the accounts. This figure is multiplied by the analyst's estimate of the proportion of this lease expenditure which effectively replaces long-term debt funding (in this case, 70%).
Source: Ind-Ra

Comparing CFMs

To show the importance of considering a variety of CFMs, a simplified analysis in Figure 5 compares three further fictional companies with identical Operating EBITDAR figures, but varying cash flow profiles. (See Appendix I for key ratio definitions.)

The purpose is not to identify one of Tradeco Ltd., Lessee Corp. or Big Spender Inc. as stronger or weaker, but simply to illustrate how widely CFMs can vary for three issuers with identical headline Operating EBITDAR numbers and identical implicit debt. To simplify the picture, Figure 5 looks at a single year of data, while Ind-Ra's analysis will focus both on multiple years of data as individual data points and on the trend these data points represent. In addition, Ind-Ra assesses intra-year volatility for issuers with highly seasonal cash generation or borrowing patterns.

Determination of the stronger credit profile will ultimately depend much more on how the trend for each issuer is projected to continue than on an individual year's results. For example, Tradeco may have had an unusually high growth year accounting for the working capital movement, or may achieve much lower or higher levels of operating profitability in other periods; Lessee Corp. may have much more volatile swings in working capital, Big Spender Inc. may have had an atypical year for capital expenditure, etc.

The financial position should also be viewed in the context of the business risks inherent in that entity's sector. The high investment levels shown for Big Spender Inc. would have a more benign influence if Big Spender Inc. were a regulated utility with predictable cost recovery plans than if Big Spender Inc. were a technology company with highly volatile future income streams.

Observations include:

FFO varies significantly across the three

- Different CFMs reveal different strengths and weaknesses

Tradeco has been hit by a higher tax charge but appears stronger than Lessee Corp. because the latter's higher rental costs boost its interest and lease costs from 30 to 57. Big Spender Inc. has the highest FFO – almost 50% higher than Lessee Corp., despite an identical Operating EBITDAR – largely because a high capital expenditure rate has led to lower cash tax charges.

Figure 5

Comparing Cash Flows – Same EBITDA, Very Different FCF

	Tradeco Ltd.	Lessee Corp.	Big Spender Inc.
Operating EBITDAR margin (%)	21.0	21.0	21.0
FFO margin (%)	10.5	9.3	13.4
Capital expenditure	Low	Low	High
Lease financing	Low	High	Low
Effective tax rate	Normal	Normal	Low
Working capital	Volatile	Low	Low
Revenue	1,000	1,000	1,000
COGS plus SG&A	-850	-890	-900
Thereof long-term rentals	-10	-50	-10
Thereof depreciation & amortisation	-50	-50	-100
Operating EBITDA	200	160	200
Operating EBITDAR	**210**	**210**	**210**
EBIT	160	160	110
Interest expense	-30	-7	-30
Interest income	5	5	5
Other income	35	35	35
Tax	-50	-45	-35
Net income	110	98	75
Cash tax	-50	-45	-21
Working capital	-170	-15	-15
Capex	-60	-60	-500
Dividends	-110	-98	-37.5
Gross debt	420	100	420
Lease adj. for gross debt	80	400	80
Adj. gross debt	500	500	500
FFO	**105**	**93**	**134**
CFO	**-65**	**78**	**119**
Non-operating cash flow*	20	20	20
FCF	**-215**	**-60**	**-399**
Op. EBITDAR/fixed charges cover	5.25	3.68	5.25
FFO/interest cover	4.50	14.29	5.47
CFO/interest cover	-2.17	11.14	3.97
FFO/fixed charges	3.63	2.63	4.35
Adj. debt/op. EBITDAR	2.4	2.4	2.4
Adj. debt/FFO	4.8	5.4	3.7
FCF/adj. debt (%)	-43	-12	-80

Source: Ind-Ra

CFO varies very widely

Tradeco has a major outflow in this year which actually turns CFO negative. This variation could be caused by a variety of sources – revenues may have been overstated (this may be contained in working capital or, in reality, visible only in the balancing items Ind-Ra uses to reconcile Operating EBITDAR to CFO). The analyst would want to know if the working capital outflow was a one-off event or recurring when evaluating Tradeco's financial flexibility. Likewise, for Lessee Corp. and Big Spender Inc., the analyst would want to know whether the modest working capital movements in Figure 5 were sustainable.

Adjusted debt to FFO tends to flatter the high-capex issuer

Big Spender Inc., although this is offset when the post-capex FCF/Adjusted Debt measure is reviewed. This latter measure shows the scale of net cash outflows at the end of the year for Big Spender Inc. (the equivalent of 80% of outstanding adjusted debt).

FFO interest coverage overstates Lessee Corp.'s financial flexibility,

because of lease funding, though this is highlighted in the FFO-based fixed charge coverage. Using this measure, Lessee Corp. is actually the weakest of the three entities, partly because Ind-Ra's fixed charge coverage calculation takes 100% of lease rentals as an interest equivalent, rather than apportioning an interest component.

FCF for Tradeco may indicate that its dividend policy is too aggressive

for its current levels of cash generation, if the working capital volatility seen in the sample year is to continue. This weakness is not evident in a comparison of dividends as a percentage of Operating EBITDAR, which is roughly equal between Tradeco and Lessee Corp.

Limitations of CFMs

Care should be taken not to disregard accruals- or fair-value based measures entirely. In corporate financial analysis, Ind-Ra considers many key measures which are not captured in the cash flow statement. Many financial events of interest to the analyst do not have an immediate cash flow impact. The marking of assets to market or taking an impairment charge, for example through a major write-down of goodwill, or the entry into a long-term derivative, can have medium- and long-term implications for cash flow, for which the book adjustments serve as a useful indicator. Other book adjustments – a write-down in inventory, for example – could signal a much more immediate impact on the issuer's financial prospects.

Cross-checks using accrual and fair-value accounting in the income statement can also indicate where the receipt of cash flows is due to one-off timing differences or persistently volatile. The primary accrual-based measure of profitability Ind-Ra looks at in this respect is Operating EBITDAR (see above). The balance sheet is also used by Ind-Ra as a reference point in determining the operational asset profile of an issuer, as a secondary test in recovery analysis and monitored for covenant compliance, where those covenants relate to balance sheet measures.

Adjusted Measures

The individual components of each CFM are computed on a standard basis for corporate issuers across the agency, but committee work and published research will regularly refer to adjusted measurements. Adjusted measures are used to highlight cases where an alternative measure – the inclusion of a certain type of investment in one category rather than another, the exclusion of dividends for one group of issuers versus a peer group – would change the ratios and the impression of an issuer's financial position created by the financial statements. Where possible, Ind-Ra will aim to make these adjustments on a sector-specific and sector-wide basis.

Analyst Adjustments and Estimates

In all of the CFMs, as with many other Ind-Ra-computed financial measures, readers should be aware that elements of the computation will be sourced from the analyst's own adjustments and estimates. Ind-Ra encourages an analytical climate where analysts regard the financial statements as a source material, rather than as a rigid set of immutable facts. Analyst estimates are central to Ind-Ra's in-house forecasts, which are a major part of the rating process, and it is appropriate that analysts' adjustments should also be used in the analysis of historical financial statements. This will give rise to differences between Ind-Ra-computed numbers and those derived mechanically from the published accounts of issuers. Where a material adjustment or estimate is not immediately visible, readers are encouraged to contact the analysts responsible to discuss. Analysts are able to provide guidance on itemised adjustments made for non-recurring, exceptional items, the weightings of hybrid debt, the computations of lease-adjusted debt and other similar items.

Impact of Foreign Exchange Movements

Cash flow typically does not reveal significant movements in foreign currency exposure otherwise reflected in income statement/other comprehensive income. Thus significant adverse movements in the exchange rate for an issuer would not be evident from the operating cash flows, but would be evident from income statement measures and/or the reconciliation of the opening and closing balance sheet data. Leverage ratios comparing debt to cash flow would also register the increase or decrease in debt outstanding relative to the reporting currency.

Artificial Sequence of Payments

- Order of accounting presentation is not how cash flows in the real world
- Revenues (and costs) can be heavily cyclical
- Periodic payments on tax, interest and dividends can be lumpy

While the chain concept is taken, broadly, from the sequential flow of the cash flow statement for most accounting jurisdictions, it is important to remember that the measures do not represent a sequential order of payments, or a legal waterfall of priorities, but rather measure a theoretical cash flow position after different types of obligations are met in full. This is a necessary simplification, when computing headline figures, to try and represent a multi-dimensional corporate existence in the uni-dimensional medium of a cash flow. In practice, the issuer does not write a check for his entire annual operating expenditure, followed the next month by a check for his annual interest bill, followed by a check for his tax bill, followed only then by a check for his annual capital expenditure bill and so on.

In general, for going concerns, this approach does not compromise the analysis. For some issuers – those with volatile working capital requirements, those at the lower end of the rating spectrum and so on – Ind-Ra also computes certain numbers in its forecasts on a quarterly or monthly basis. These computations pay greater attention to the actual operational receipt and disbursement of cash, and try to narrow the gap between financial statement presentations and the actual sequence of flows in and out of the issuer's treasury. In addition, individual ratios computed by Ind-Ra will span different elements of the chain – (CFO-capex)/interest, for example – and thus highlight additional areas for research beyond those addressed by just the three primary CFMs.

Consolidated Versus Unconsolidated Cash Flows

- Sum-of-the-parts results can mask greatly differing cash flow generation and consumption within a consolidated group
- In reality, this is difficult to spot from the outside – this is an unavoidable limitation to financial statement interpretation

Ind-Ra rates both holding companies and operating subsidiaries, using a variety of consolidated and stand-alone financial information. Material differences will, however, exist in the cash generating ability of different legal entities within a consolidated group, masked by the process of consolidation. Figure 6 is an example, exaggerated for effect, illustrating the importance of a full understanding of each major operation in which a consolidated group is active.

Figure 6
Consolidation – How Groups Work

	International widgets plc (consolidated)	New product Inc.	Old timer Ltd.
Revenues	**1,900**	800	1,100
Operating EBITDA	**520**	520	0
Operating EBIT	**400**	500	-100
Net income	**240**	300	-60
FFO	**360**	320	40
Working capital	**-200**	-620	420
CFO	**160**	-300	460

Source: Ind-Ra

International Widgets plc, a manufacturer of widgets, has set up an entirely new product line based on online sales. While the former core business, located in Oldtimer Ltd., retains a significant share of group revenues, it is operating EBITDA neutral, and makes a loss of -100 at the operating EBIT level. Nevertheless, an aggressive policy of delaying payment to trade creditors and inventory liquidation has allowed Oldtimer Ltd. to generate significant albeit unsustainable positive working capital, and end the year with a positive CFO of 460.

Newproduct Ltd., while a success in sales terms, and contributor of 100% of the group's EBITDA of 520 (and 90% of FFO of 360), has successively failed to implement its innovative invoicing system, and has a significant backlog of hand-processed invoices and collection notices. As a result, the new subsidiary is being crushed by unpaid customer receivables, leading to a negative CFO of -300.

At the consolidated level, while there appears to have been a large working capital outflow in the year, the severe challenges faced by the business are not immediately apparent from the consolidated figures. In addition, as the cash inflow at Oldtimer Ltd. is not profit, and the profit at Newproduct Ltd. is not cash, parent entity International Widgets plc may face pressures on its ability to upstream any dividends from either subsidiary to service any parent level obligations.

As a result, in addition to assumptions regarding the internal fungibility of resources for group's operating with central treasuries, Ind-Ra typically considers disclosure at the subsidiary level where this data is available from public and non-public sources.

Appendix I: Key Ratio Definitions

FFO Interest Cover

A central measure of the financial flexibility of an entity, which compares the operational cash generating ability of an issuer (after tax) to its financing costs. Many factors influence coverage – including general funding costs, the mix of fixed-rate versus floating-rate funding, the use of zero-coupon or PIKable debt, and so on. For this reason, the coverage ratios should be considered alongside the appropriate leverage ratios.

FFO plus Gross Interest Paid minus interest received plus Preferred Dividends; divided by Gross Interest Paid plus Preferred Dividends

FFO Fixed Charge Cover

A measure of financial flexibility of particular relevance for entities that have material levels of lease financing. Note that this ratio inherently gives a more conservative result than interest cover (i.e. coverage on a debt-funded and lease-funded capital structure are not directly comparable), as the entirety of the rental expenditure (ie the equivalent of interest and principal amortisation) is taken in both the numerator and denominator.

FFO plus Gross Interest Paid minus interest received plus Preferred Dividends plus Rental Expenditure; divided by Gross Interest Paid plus Preferred Dividends plus Rental Expenditure

FCF Debt Service Coverage

A measure of the ability of an issuer to meet debt service – both interest and principal – from organic cash generation, after capital expenditure and assuming the servicing of equity capital. This indicates the entity's reliance upon either refinancing in the debt or equity markets or upon conservation of cash achieved through reducing common dividends or capital expenditure or by other means.

FCF plus Gross Interest Paid plus Preferred Dividends, divided by Gross Interest Paid plus Preferred Dividends plus Prior Year's Debt Maturities due in one year or less

FFO Adjusted Leverage

A measure of the debt burden of an entity relative to its cash generating abilities, using a lease-adjusted debt-equivalent, and taking account of equity credit deducted from hybrid debt securities that may display equity-like features.

Gross Debt, plus Lease-Adjustment minus Equity Credit for Hybrid Instruments plus Preferred Stock; divided by FFO plus Gross Interest Paid minus interest received plus Preferred Dividends plus Rental Expense

FFO Return on Adjusted Capital

A measure of the general profitability of an issuer indicative of its ability to cover its capital costs. This also provides an indicator of an issuer's ability to attract and successfully employ capital in future.

FFO plus Gross Interest Paid minus interest received plus Preferred Dividends plus Rental Expenses; divided by Gross Debt plus Lease-Adjustments plus Common Equity plus Preferred Stock plus Minority Interests

CFO/Capital Expenditure

CFO/capital expenditure is a measure of the ability of a company to meet its capital expenditure requirements from organic cash generation. This includes a commentary on the sustainability of the entity's financial profile, and the entity's vulnerability to external financing constraints.

CFO divided by capital expenditure

Additional Ratios

FFO Net Interest Cover

A measure that is useful where interest income or receipts are modest, where a consistent data series of gross interest paid is not available, or to provide a consistent data series with forecasts that may be computed on a net debt basis.

FFO plus Gross Interest Paid minus Interest Received plus Preferred Dividends; divided by Gross Interest Paid minus Interest Received plus Preferred Dividends

FFO Adjusted Net Leverage

A measure that is useful where unrestricted cash and marketable securities are de minimis, where they are known to be held to defease debt or debt-like obligations, or where cash balances are expected to be maintained at a consistent level, on a non-seasonal basis.

Gross Debt plus Lease-Adjustments minus Equity Credit for Hybrid Instruments plus Preferred Stock, minus freely available cash; divided by FFO plus Gross Interest Paid minus Interest Received plus Preferred Dividends plus Rental Expenses

FCF/Total Adjusted Debt

An additional measure using the organic cash flow of an issuer to measure ability to repay debt, assuming the annual servicing of debt and equity capital.

FCF divided by Gross Debt plus Lease-Adjustments minus Equity Credit for Hybrid Instruments plus Preferred Stock.

Other Points

Debt may also be adjusted to exclude non-recourse debt, in which case any cash flow derived from the operations financed by such non-recourse debt is also excluded from the calculation.

Gross interest paid is the cash amount paid for interest expense (i.e. includes capitalised interest, excludes accrued interest unpaid).

CFO and EBITDA-based (and for lease-adjusted measures, EBITDAR-based) ratios use similar computations, though there is no add back of interest paid for EBITDA/R.

How Does Ind-Ra Treat…?

Non-Operational Cash Flow

Typically this would include any individual items identified or estimated by an analyst as lying outside the scope of the issuer's underlying core operating business, and not otherwise covered in asset or business divestments. It may include the cash costs of a restructuring program (severance and consultancy costs etc.), a net cash in- or outflow from discontinued operations (excluding any receipts for actually selling the operations), an unusually large insurance claim receipt or litigation settlement. It may also include associate dividends as described below.

Associates and Joint Ventures

Associate income is treated as follows. Where the analyst determines that the income has stable, annuity-like characteristics or relates to a core element of the business, the dividends received from that associate are included in the FFO calculation (this occurs automatically based on the computation of FFO using CFO as a base). Where the analysts determines that the cash flows from associates are volatile or separate from the core business (and where the issuer is also thus unlikely to control and/or support the operations of the investment), the analyst will manually extract the associate dividend amount from the FFO and CFO calculations and include this figure as non-operational cash flow instead. Other than in rare instances, or where the amount involved is either de minimis or disclosure is inadequate to permit exclusion, income or cash flow from associates is not included within Operating EBITDAR.

Where an analyst has excluded dividends received from a JV, they may also choose to exclude any debt associated with that enterprise that has been consolidated into the issuer's balance sheet. Similarly, if any debt of any JV is excluded as non-recourse, the cash flow relating to that JV must also be added only as non-operational cash flow, and is thus excluded from CFO and FFO computations.

Appendix II: Cash-Flow Chart

Figure 7

Financial Summary and Cash Flow

Sample relationship between Income statement and CFMs

	Revenues	
-	Operating expenditure	
+	Depreciation & amortisation	
+	Long-term rentals[a]	
=	**Operating EBITDAR**	Income Statement items
-	Cash interest paid, net of interest received	
-	Cash tax paid	
+	Associate dividends[b]	
-	Long-term rentals[a]	
+/-	*Other changes before FFO*[c]	
=	**FFO**	
+/-	Working capital	
=	**CFO**	
+/-	Non-operational cash flow	
-	Capital expenditure	
-	Dividends paid	
=	**FCF**	
+	Receipts from asset disposals	
-	Business acquisitions	Cash Flow Statement Items
+	Business divestments	
+/-	Exceptional & other cash flow items	
=	**Net cash in/outflow**	
+/-	Equity issuance/(buyback)	
+/-	FX movement	
+/-	*Other items affecting cash flow*[d]	
=	Change in net debt	
	Opening net debt	
+/-	Change in net debt	
	Closing net debt	

[a] Analyst estimate of long-term rentals
[b] May be excluded from FFO and CFO as Non-operational or non-recurring, see page 3
[c] Implied balancing item to reconcile operating EBITDAR with FFO
[d] Implied balancing item to reconcile FCF with change in net debt
Source: Ind-Ra