



## ICRA Rating Feature

### Framework for Liquidity Analysis in Corporate Ratings

ICRA's credit ratings are a symbolic representation of its opinion on the relative credit risk associated with the debt instrument being rated. Liquidity analysis is integral to the evaluation of an entity's credit risk profile and the result of such analysis is a key determinant of an entity's rating. The note articulates ICRA's approach for analysing the liquidity profile of entities in the non-financial sector.

#### ICRA's Approach for Evaluating the Liquidity Profile of Entities

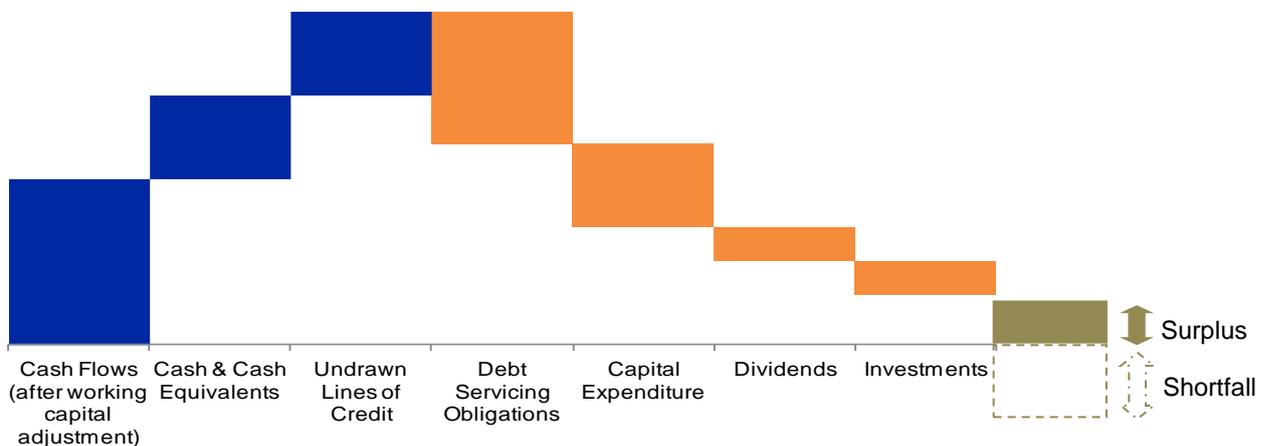
The liquidity profile of entities is assessed based on their ability to generate cash from internal resources and have access to committed sources of external financing, in relation to cash obligations such as debt repayments and investments over the near term. Higher the cushion available between the resources available and the obligations, better the liquidity profile of an entity.

**Free Cash Flows:** The primary measure of an entity's internal cash generation ability is its free cash flow position. Free cash flows are operating cash flows net of interest payments, changes in working capital and outflows towards capital expenditure (capex). Positive free cash flow generation on a sustained basis is generally a reflection of an entity's business strength and its ability to regularly reinvest in the business to sustain or improve its competitive position.

**Cash Balances:** Apart from positive free cash flows, internal resources as represented by balance sheet items viz., unencumbered cash balances and liquid investments also support an entity's liquidity as these could be dipped into to meet the shortfalls between free cash flows and cash commitments.

**External Financing:** Entities with positive free cash flows and adequate balance sheet resources in relation to cash obligations need to rely less on external sources of financing as compared to entities with negative free cash flows or inadequate balance sheet resources. However, even for the former, internal cash generation can show volatility and fall short of expectations for reasons such as subdued business, profitability pressures and higher working capital demand. Thus, having access to committed sources of external financing is a useful liquidity enabler. One key source of committed external financing is sanctioned lines of credit from banks and financial institutions. If an entity has a committed working capital facility that is largely undrawn, it could support an entity's liquidity in case of temporary cash flow mismatches. Likewise, adequate tie-up of term loans by an entity to fund a project capex would support an entity's business growth objectives without undermining its liquidity.

Liquidity Snapshot over any Defined Period



The above measures are analysed by ICRA to ascertain, on a relative basis, the adequacy of an entity's liquidity arrangements to meet its obligations. These measures are discussed in greater detail in the sections ahead.

In addition to cash flow analysis, ICRA also assesses the adequacy of an entity's long-term sources of funds in relation to its commitments towards creation of long-term assets. An asset-liability mismatch exposes an entity to refinancing risks. ICRA also evaluates the rated entity's financial flexibility and the management's policy and approach towards liquidity management, as these mitigate refinancing risks while supporting the liquidity profile.

## **FREE CASH FLOWS (FCF)**

Liquidity assessment is centred on ICRA's estimates of an entity's projected cash flows and cash obligations over the near term. In developing these estimates, ICRA considers the potential variability of an entity's operating cash flows due to a variety of factors, including industry cyclicality, the entity's competitive position, seasonality in working capital demand and the need to incur capex to meet growth objectives.

### **Variability in Cash Flows**

Analysing the past cash flows provides a perspective on an entity's ability and policy with regard to liquidity management; however, past liquidity profile need not be a predictor of an entity's prospective liquidity position. Moreover, relying solely on the past liquidity profile may result in a point-in-time analysis bias as the liquidity position on a given balance sheet date may appear strong due to recent equity infusion by the entity or fund-raising which is yet to be deployed. Thus, apart from assessing the past cash flows, liquidity analysis involves estimating the entity's future cash flow generation as well as fixed and contingent obligations. In addition to estimating the entity's baseline free cash flows on the basis of an assessment of the entity's business plan and its exposure to business and financial risk, a sensitivity analysis on key variables (such as revenue growth, cost drivers and working capital cycle) that may impact liquidity is performed. The impact of stress scenarios on the free cash flows is assessed to determine the ability (or lack thereof) of an entity to meet its obligations. Greater the ability of an entity to withstand stress scenarios, taking into account the external liquidity arrangements, the better the liquidity profile of an entity.

While the cash flow analysis is generally done over a one-year time horizon; however, in case of businesses that are seasonal, implying peaking of working capital requirements during few months, or bunching up of large cash obligations during few months such as bullet principal repayments or Letter of Credit (LC) payments; cash flow analysis is also undertaken on a monthly, quarterly or half-yearly basis to assess the impact on liquidity during such periods. This analysis draws from the fact that two entities with similar liabilities can have dissimilar liquidity profiles depending on the maturity profile of their liabilities. Longer tenure borrowings with spread out repayments are likely to result in less pressure on the cash flows and thereby the liquidity profile as compared to shorter tenure borrowings with bunched-up repayments. Moreover, a ballooning repayment structure with repayments increasing in line with expected ramp up in production from a new unit align the repayment obligations with the cash flows and curtail liquidity pressures. Similarly, in the case of seasonal businesses (as in beverages, sugar, cotton ginning, wind and solar power) or lumpiness in cash collections (as in educational institutions), an entity whose repayment schedule is structured to align with the cash flows will generally have a better liquidity profile compared to an entity with equal instalments spread through the year.

### **Working Capital Cycle**

Working capital cycle<sup>1</sup> is the amount of time taken by an entity to convert its net current assets (receivables and inventory net of payables) into cash. Longer the working capital cycle, the greater the working capital funding requirement for an entity and vice-versa. Typically, entities in a growth phase that have a shorter working capital cycle will have a better liquidity profile due to faster cash turnaround and thereby lower

---

<sup>1</sup> Working capital cycle is defined as Receivable Days + Inventory Days – Payable Days

incremental working capital requirements. In addition, such entities will have a lower proportion long-dated receivables and inventory which will limit the risk of write-downs on such assets in future.

However, one of the analytical issues while assessing the working capital cycle, which is not directly reflected in cash flows, relates to distinguishing between entities whose favourable working capital cycle is because of inherent efficiency in working capital management and those where a favourable working capital cycle is an outcome of stretching of payables. The latter may be a reflection of liquidity stress rather than an indicator of bargaining power with business partners or efficiency in working capital management. In such a situation, an entity may find itself in a deeper liquidity crisis whenever such liberal credit terms are snapped.

In other cases, an entity may be relying solely on non-fund based limits (such as LCs) to manage its working capital requirements (instead of fund-based working capital limits). In such cases, if the gross operating cycle (Receivable Days + Inventory Days) is longer than the tenure of the non-fund based limits, the entity may often find itself in a tight liquidity position as the time required for conversion of such current assets into cash is likely to be longer than the tenure of the underlying current liabilities.

Apart from the length of the working capital cycle, liquidity assessment also involves analysing the stability of an entity's working capital cycle. A declining working capital cycle, combined with improving operating profit margins is generally indicative of efficient working capital management as well as improvement in bargaining power with the business partners and vice versa.

## **CASH BALANCES**

### **Unencumbered Cash Balances and Liquid Investments**

Consistently high levels of liquid investments and unencumbered cash balances are seen positively from a liquidity perspective. Liquid investments and unencumbered cash balances refer to the funds deposited in banks' current accounts and liquid mutual funds, which an entity can access without any restrictions at short notice. Encumbered fixed deposits or cash balances which are maintained as part of the DSRA (Debt Service Reserve Account) mechanism are also considered as liquid investments as they are specifically maintained to overcome any short-term liquidity pressure in debt servicing and are generally automatically utilised by the lenders to meet shortfalls. Moreover, unencumbered fixed deposits, although have a fixed maturity, are also considered liquid as they may be redeemed anytime or an overdraft facility may be availed against them to take care of any temporary cash flow mismatches.

While an entity may deposit its surpluses in other instruments such as closed ended/ locked-in securities, corporate bonds and loans and advances to group/unrelated entities, these are not considered as liquid as these are not redeemable at short notice. Close-ended/ locked-in securities have a fixed maturity and are not redeemable before the maturity date, while the liquidity of corporate bonds in the secondary market is generally limited. Moreover, redemption of loans and advances by the group/ unrelated companies is dependent on their own credit profile and thus cannot be assumed to be always repatriated to the rated entity in a timely manner or on demand.

## **EXTERNAL FINANCING**

External financing refers to undrawn lines of credit which could be accessed by an entity to meet shortfalls between cash generation from internal sources and obligations. The other manner of external financing includes funding committed by investors in the form of debt, equity or quasi-equity. Yet, despite such access, an entity's liquidity position may remain tight if the mix of long-term and short-term sources of financing in relation to the nature of assets (current or non-current) is uneven, exposing an entity to asset-liability mismatch and hence refinancing risks. However, liquidity risk could be mitigated if an entity has strong financial flexibility to raise fresh capital or refinance existing borrowings at a short notice. Sources of such financial flexibility could emanate from strong financials, unencumbered cash flows or assets or linkages with a strong parent or group.

## Undrawn Lines of Credit

An undrawn line of credit refers to the unutilised portion of sanctioned bank limits (working capital as well as term loan) which could be utilised by an entity at any point of time to meet its obligations. Apart from overcoming cash flow variability because of subdued business or macro-economic environment, the back-up lines also become important to tide over disruptions, if any, in the financial markets as an entity's refinancing ability generally gets restricted during such periods. An entity may have undrawn fund-based working capital limits because of healthy cash generation, obviating the need to utilise the sanctioned working capital limits fully. Undrawn term loans may be related to a pending capital expenditure or may pertain to an unutilised general purpose corporate loan that may have been availed of in anticipation of a cash flow shortfall.

The sufficiency of undrawn working capital limits is determined by taking into account the expected utilisation of the working capital limits in relation to the lower of the sanctioned working capital limits and the available drawing power as utilisation of the working capital limits is generally capped by the lenders at the lower of the entity's drawing power and sanctioned limits. While the presence of adequate undrawn working capital limits is a positive from a liquidity perspective, an entity may choose to operate at lower than eligible limits because of which its working capital limit utilisation may appear to be high. In such a situation, the sufficiency of the drawing power is also assessed in relation to the total working capital borrowings (including short-term working capital loans and commercial paper borrowings) as it indicates the flexibility which an entity may have to enhance its limits in the future. The sufficiency of undrawn term loans is assessed in relation to the funding requirements for project capex and for general corporate purposes while taking into account other committed sources of funding such as equity.

To get a perspective of an entity's track record in maintaining adequate undrawn working capital limits with respect to monthly obligations (such as statutory payments, debt servicing and LC payments), ICRA also analyses the monthly utilisation of the entity's working capital limits in relation to its sanctioned working capital limits (such as cash credit, overdraft and export packing credit) or the drawing power, whichever is lower, over the preceding 12 to 24-month period.

The utilisation of working capital limits with respect to the sanctioned limits (or drawing lower) may appear high because of the following reasons:

- ❖ Inadequate availability of long-term funds resulting in dependence on short-term funds such as working capital borrowings
- ❖ Increase in working capital requirements without a timely tie-up of working capital limits because of reasons such as unavailability of adequate collateral or inability to fund the required margin, besides procedural reasons

## Adequacy of Long-Term Sources of Funds

Adequacy of long-term funding is another important measure of an entity's liquidity profile. While cash flow analysis assesses the adequacy of an entity's internal resources and committed external sources of financing in relation to its obligations, it does not distinguish between the nature of such cash flows. In other words, cash flow analysis does not specifically capture whether it is the long-term sources of funds that are deployed towards creation of long-term assets, including fixed assets, long-term investments and long-term loans and advances; or it is the short-term funds. In cases where short-term sources of funds (such as working capital limits, short term loans and customer advances) are deployed for long-term purposes, liquidity of an entity remains vulnerable to timely refinancing/ renewal of the short-term sources of financing. Thus, assessing the adequacy of an entity's long-term sources of funding is an important aspect of liquidity analysis.

The long-term funding requirements may be towards assets such as:

- ❖ Fixed Assets
- ❖ Long-term investments, loans, advances
- ❖ Margin towards working capital and non-fund based limits

The long-term funding may be from sources such as:

- ❖ Net worth / Internal cash flows
- ❖ Preference shares
- ❖ Long-term loans, non-convertible debentures and such other instruments
- ❖ Long-term advances, deposits from customers and business partners

A quick assessment of an entity's long-term funding adequacy could be made by referring to the current ratio. Generally, higher is the current ratio, lower is the mismatch between long-term assets and long-term sources of funding. However, the current ratio is analysed after adjusting for the long-dated receivables and obsolete inventory as such assets may not be readily convertible to cash and are generally ineligible for short term bank funding. A related aspect is evaluation of receivable and inventory ageing to appropriately estimate the long term funding requirements as well as to assess the possibility and extent of write-off that may be required towards these assets. In addition to the ageing analysis for current assets, the quality of receivables is also assessed to determine the likelihood of timely collection of such receivables. Significant proportion of unsecured receivables concentrated among a few entities with weak or unascertainable credit profile poses a bigger risk as compared to a diversified distribution of receivables (among uncorrelated entities) or concentration among entities having a stronger credit profile.

### **Financial Flexibility**

Financial flexibility refers to the ability of an entity to raise fresh capital or refinance existing borrowings regularly at short notice. Typically, the degree of financial flexibility will be higher if the entity has large-scale operations with strong financials, unencumbered cash flows (such as rental income, annuity payments in road projects) or unencumbered assets/ flexibility to borrow against existing assets. Financial flexibility may be further reinforced by an entity's strong parentage or linkages with a strong group. While an entity may appear to have a certain degree of financial flexibility, the same is seen and adjusted against its track record, especially at times of distress or market disruptions.

Other things being the same, strong financial flexibility enhances an entity's liquidity profile in that it gives the entity the flexibility to raise fresh capital or refinance an existing borrowing to tide over temporary cash flow mismatches. As a result, while an entity may have weak cash flows; its strong financial flexibility mitigates such risks and supports the liquidity profile.

### **Summing Up**

This note discusses ICRA's approach for assessing the liquidity profile of an entity. Each of the measures highlighted in the note is necessary, but not sufficient by itself, for evaluating an entity's liquidity position. That is because an entity's liquidity position is driven by the interplay among these measures rather than by any of the factors in isolation. Since the liquidity profile is dependent on the adequacy of the entity's future cash flows in relation to its obligations, a detailed evaluation of the entity's business and financial risks, its competitive strengths, its business objectives and its plans and strategies is undertaken. These apart, ICRA also assesses the entity's management policy and approach towards maintaining adequate liquidity buffers to tide over short-term liquidity pressures.

## Select Liquidity Ratios and Cash Flow Measures

Ratio	Measure	Description
<b>Gross Cash Conversion Cycle</b>	Debtor Days + Inventory Days	<p>A long gross cash conversion cycle indicates that an entity has high dependence on working capital funding. In addition, such entities are likely to have higher risk of long-dated receivables turning bad and inventory turning obsolete</p> <p>An entity may have a long gross cash conversion cycle owing to its unique business model or because of the nature of the industry. In such cases, the entity may be getting adequately compensated for a longer cash conversion cycle by way of realising better pricing for its products, manifested in the form of higher operating profit margins</p>
<b>Current Ratio</b>	Ratio of current assets to current liabilities	A low current ratio typically indicates reliance on short-term funding. An entity that prolongs making payments to its suppliers because of tight liquidity will have a low current ratio
<b>Cash Cover Ratio</b>	Ratio of FCF to obligations	Entities for which this ratio is less than unity, cash gap would need to be met through cash balances and committed external sources of financing. It may be noted that an entity may not find itself tight on liquidity even if this ratio is less than unity. This may be applicable in situations where although a large project capex is planned, the entity's cash flows (along with cash and tied-up equity/ mezzanine debt) are sufficient to meet the margin funding requirements for capex; and financial closure is in place for funding the overall capex commitment
<b>Fund Flows from Operations (FFO)</b>	OCF less Operating Working Capital Changes	<p>Several cash flow measures (as mentioned alongside) are applied in financial risk analysis, each of which carries specific information content. Additional adjustments may be carried out on these to clean up for the impact of one-time, exceptional or non-recurring items. Finally, adequacy of adjusted cash flows and other resources is measured against cash obligations so as to assess the liquidity position of an entity</p>
<b>Gross Cash Flows (GCF)</b>	FFO plus Non-Operating Income less Non-Operating Working Capital Changes	
<b>Retained Cash Flows (RCF)</b>	GCF less Dividends Paid	
<b>Free Cash Flows (FCF)</b>	RCF less Capital Expenditure	

**CORPORATE OFFICE**

Building No. 8, 2<sup>nd</sup> Floor, Tower A; DLF Cyber City, Phase II; Gurgaon 122 002

Tel: +91 124 4545300; Fax: +91 124 4050424

Email: [info@icraindia.com](mailto:info@icraindia.com) Website: [www.icra.in](http://www.icra.in)

**REGISTERED OFFICE**

1105, Kailash Building, 11<sup>th</sup> Floor; 26 Kasturba Gandhi Marg; New Delhi 110001

Tel: +91 11 23357940-50; Fax: +91 11 23357014

---

Branches: **Mumbai**: Tel.: + (91 22) 24331046/53/62/74/86/87, Fax: + (91 22) 2433 1390 **Chennai**: Tel + (91 44) 2434 0043/9659/8080, 2433 0724/ 3293/3294, Fax + (91 44) 2434 3663 **Kolkata**: Tel + (91 33) 2287 8839 /2287 6617/ 2283 1411/ 2280 0008, Fax + (91 33) 2287 0728 **Bangalore**: Tel + (91 80) 2559 7401/4049 Fax + (91 80) 559 4065 **Ahmedabad**: Tel + (91 79) 2658 4924/5049/2008, Fax + (91 79) 2658 4924 **Hyderabad**: Tel +(91 40) 2373 5061/7251, Fax + (91 40) 2373 5152 **Pune**: Tel + (91 20) 2552 0194/95/96, Fax + (91 20) 553 9231

---

© Copyright, 2016 ICRA Limited. All Rights Reserved.

Contents may be used freely with due acknowledgement to ICRA.

All information contained herein has been obtained by ICRA from sources believed by it to be accurate and reliable. Although reasonable care has been taken to ensure that the information herein is true, such information is provided 'as is' without any warranty of any kind, and ICRA in particular, makes no representation or warranty, express or implied, as to the accuracy, timeliness or completeness of any such information. Also, ICRA or any of its group companies, while publishing or otherwise disseminating other reports may have presented data, analyses and/or opinions that may be inconsistent with the data, analyses and/or opinions presented in this publication. All information contained herein must be construed solely as statements of opinion, and ICRA shall not be liable for any losses incurred by users from any use of this publication or its contents.