



Guide to managing liquidity risk

CPA Australia Ltd ('CPA Australia') is one of the world's largest accounting bodies representing more than 129,000 members of the financial, accounting and business profession in 110 countries.

For information about CPA Australia, visit our website cpaustralia.com.au

First published
CPA Australia Ltd
ACN 008 392 452
Level 20, 28 Freshwater Place
Southbank Vic 3006
Australia

ISBN 978-1-921742-00-2

Legal notice

Copyright CPA Australia Ltd (ABN 64 008 392 452) ("CPA Australia"), 2010. All rights reserved.

Save and except for third party content, all content in these materials is owned by or licensed to CPA Australia. All trade marks, service marks and trade names are proprietary to CPA Australia. For permission to reproduce any material, a request in writing is to be made to the Legal Business Unit, CPA Australia Ltd, Level 20, 28 Freshwater Place, Southbank, Victoria 3006.

CPA Australia has used reasonable care and skill in compiling the content of this material. However, CPA Australia and the editors make no warranty as to the accuracy or completeness of any information in these materials. No part of these materials are intended to be advice, whether legal or professional. Further, as laws change frequently, you are advised to undertake your own research or to seek professional advice to keep abreast of any reforms and developments in the law.

To the extent permitted by applicable law, CPA Australia, its employees, agents and consultants exclude all liability for any loss or damage claims and expenses including but not limited to legal costs, indirect special or consequential loss or damage (including but not limited to, negligence) arising out of the information in the materials. Where any law prohibits the exclusion of such liability, CPA Australia limits its liability to the re-supply of the information.

Contents

Introduction	2
Who is this guide for?	2
What is liquidity risk?	2
1. Sources of liquidity risk	3
2. Need for adequate liquidity	4
3. Methods of measuring liquidity risk	5
Cash flow forecasting	5
Financial ratio analysis	5
Assessment of funding facilities	6
4. Methods to manage liquidity risk	7
Cash flow forecasting	7
Optimising working capital	7
Financing facilities	7
Liquidity buffer	8
Conclusion	9
Appendix A: Preparing a cash flow forecast	10
Appendix B: Checklist for managing cash flow and liquid assets	11



Introduction

This guide provides an overview of the issues associated with understanding and managing liquidity risk.

Who is this guide for?

This guide is designed to assist members who have responsibility for managing the liquidity of their employer or client. It may be particularly useful for members working in small-to-medium sized businesses (SMEs), who often have a wide variety of responsibilities.

What is liquidity risk?

Liquidity risk is the risk that a business will have insufficient funds to meet its financial commitments in a timely manner. The two key elements of liquidity risk are short-term cash flow risk and long-term funding risk. The long-term funding risk includes the risk that loans may not be available when the business requires them or that such funds will not be available for the required term or at acceptable cost.

All businesses need to manage liquidity risk to ensure that they remain solvent.

1. Sources of liquidity risk

Liquidity risk can arise from a number of areas within the business, including:

- seasonal fluctuations
- unplanned reduction in revenue
- business disruption
- sustained reduction in profitability
- unplanned capital expenditure
- increase in operational costs
- inadequate management of working capital
- future debt repayments
- breach of loan covenants
- not matching the maturity profile of debts to the assets which they are funding
- inadequate or non-existent financing facilities
- inadequate cash flow management

2. Need for adequate liquidity

Liquidity is dynamic and can change according to both business and market conditions. These conditions can be both expected and unexpected, and will give rise to the need to ensure adequate liquidity to cover all events. In the event that a business faces a cash flow crisis, then the consequences can be wide-ranging.

The potential issues faced could include (but are not limited to):

- impact on supply of goods or services due to inability to meet payment terms
- inability to meet capital expansion plans
- breaching bank loan covenants
- increase in penalties for non-payments and late payments, such as tax obligations etc.
- breaching legal requirements including non-payment of payroll, superannuation and similar obligations
- recall of loan funds due to non-payment of interest and fee commitments
- insolvency / bankruptcy

A business with adequate liquidity has less risk of being unable to meet their obligations than an illiquid one. Where a business has adequate liquidity, there is also the possibility of improved profitability through reduced interest expense or increased interest income, together with greater financial flexibility to negotiate enhanced terms with suppliers and financiers or participate in new business opportunities.

Cash flow is an integral part of everyday operations. Generally speaking, the root cause of many business failures stems from the inadequate management of available cash, the lack of available cash resources, or lack of access to appropriate financing facilities.

3. Methods of measuring liquidity risk

Due to the numerous sources of liquidity risk, there are several ways of measuring this risk. This guide provides some examples of the simpler measures which can be applied and understood by most businesses.

Cash flow forecasting

Whether or not a business is experiencing tight liquidity, a regular cash flow forecast is a prudent step for any business to take.

Where a business is suffering a cash flow crisis, or in the event that either one of business or market conditions remain volatile, short-term liquidity monitoring should be considered. Where the business has large volumes of daily cash flow transactions (this would depend on the industry, although a rule of thumb would be ten or more daily cash flow transactions), then short-term liquidity may need to be managed daily and monitored often. Where the daily cash flow volumes are less, then weekly cash flow forecasting is best suited, ensuring that the management of short-term liquidity does not put undue pressure on the business resources. Short-term liquidity management will highlight any emerging problems quickly.

Longer term cash flow forecasts can be used to support the strategic objectives of the business and also provide financial details for proposed projects or lenders. In this case, the longer-term cash flow forecast is less about solvency and more focused on longevity of the business. These requirements can be assessed by using a monthly cash flow forecast for the appropriate period that needs to be assessed. In most circumstances, a long-term cash flow forecast will be developed for the current financial year to monitor the cash flow of operational activities.

It is important that all business units contribute to the cash flow forecasts to ensure that all sources of liquidity risk are identified. In the event that a cash flow forecast is developed to support a proposed project, then the duration of cash flow forecast should match the term of the project. This is particularly important where a business is altering its strategic direction.

Long-term liquidity can be further assessed by means of sensitivity analysis on the forecast to evaluate the impact of different strategies and levels of business activity in relation to prospective success of internal and external funding.

When preparing cash flow forecasts, it is essential that realistic assumptions are built into the model.

See Appendix A for more information on how to prepare a cash flow forecast.

Financial ratio analysis

Financial ratios can be used to identify key areas of liquidity risk. To measure both short-term and long-term liquidity risk, there are three main categories.

1. Indicators of operating cash flows

- The ratio of earnings before interest and tax (EBIT), as a multiple of interest expense, is an indicator of the short-term ability to service debt. Ratios may vary from industry to industry and a ratio below industry standards should be critically examined as it may indicate a weakness to an unexpected downturn in income, which could result in insolvency or default on loan covenants. For businesses that have large amounts of non-cash expenses (amortisation, depreciation, deferral items, etc.) it may be more appropriate to look at earnings before interest, tax, depreciation and amortisation.
- The ratio of debt to gross cash flow (operating profit plus depreciation and deferrals) indicates the financial strength of the business in terms of how many years of cash flow would be required to repay all debt assuming no new debt or equity raisings.
- The amount of retained cash which represents cash flows after payment of dividends and owners' withdrawals (net available cash).
- The amount of available uncommitted funds which are calculated by adjusting retained cash balances for working capital needs and capital expenditures.

2. Ratios of liquidity

Financial ratios do not necessarily identify the timing of cash flow which is crucial for liquidity management. Furthermore, ratios must be used with care because they may provide only an indication of current liquidity based on past performance and are not an indication of the outcome of future operations.

Ratios which may be useful in assessing liquidity include:

- The acid or Quick Ratio, which indicates the extent to which current liabilities can be paid immediately out of liquid assets (cash or cash equivalent), and may indicate the size of the buffer of cash.
- The current ratio, which compares the book value of current assets with current liabilities. A ratio of over 1:1 is normally considered to be comfortable. A ratio below 1:1 needs attention as it may indicate a shortage of funds.

- The availability of undrawn banking facilities as a percentage of current liabilities, which indicates the existence of a buffer in case of unexpected cash requirements.

When using these ratios, it is important to consider the value used for both stock and debtors. For example, if the business has a large amount of unsalable stock or uncollectable debtors funds, then the ratios may need to use adjusted figures to reflect this.

3. Financial strength (leverage)

The more highly geared (i.e. the greater the ratio of debt to total funds) the business is, the greater its vulnerability to any downturn in cash flows. This would be especially serious if it coincides with a time for repayment of debt. Highly geared businesses have less capacity to absorb losses or obtain rollover funds.

The appropriate ratio of debt to total funds (debt plus equity) will depend on the type of business and the nature of the operations. As a broad generalisation, a ratio of debt to total funds below 30% may be prudent (although representing an uneconomic level of gearing), while if debt is over 60% of total funds, this may indicate that the business is becoming highly geared and may be vulnerable in the event of a sudden decline in cash flow from operations. Clearly, cash flow (revenue) quality, consistency and reliability are critical factors in determining an appropriate gearing.

Assessment of funding facilities

A thorough assessment of available funding may identify risks to the cash position of the business. The key areas to assess would include:

- the extent the business relies on financing facilities
 - the extent the business relies on only one lender
 - the maturity profile of the facilities, where there is more than one financing facility, ensuring that not all financings mature on the same date
 - strength of the relationships with lenders, shareholders and investors
 - availability of funds in extreme crisis conditions (e.g. Global Financial Crisis)
 - status of financing facilities (committed or uncommitted)
- thorough review of loan requirements or covenants to understand the trigger points and subsequent consequences
 - the ability of the business to raise additional equity

4. Methods to manage liquidity risk

Liquidity risk may be mitigated by careful cash flow management including optimising working capital and by maintaining unused, committed financing facilities or a liquidity buffer. These allow the business to easily meet its future requirements or contingencies.

The main methods to manage liquidity risk are explained below.

Cash flow forecasting

The annual operating budget forms the basis of the cash flow forecast and the person responsible for monitoring and managing cash must be closely involved in its preparation. Regular cash flow forecasts, when compared to the annual budget, will highlight variances from what was anticipated and prompt corrective action to offset unfavourable trends in availability of cash. Planning should take into account transaction and other associated costs including the effect of tax payments on available funds.

Those responsible for managing cash flow must have ready and timely access to essential information from the rest of the business in order to plan the optimal use of the business' cash flow and any supplementary funding in a cost-efficient manner. The validity and accuracy of the forecasting process should be assessed periodically to provide feedback about the quality of earlier estimates and so increase the quality of future forecasts. Effective management information systems that provide appropriate reports to facilitate decision making are essential.

Sensitivity analysis will indicate the effect on cash of fluctuations in business activity and facilitate the development of emergency plans to offset unexpected shortfalls in cash. Appendix A provides further detail on how to prepare a cash flow forecast.

Optimising working capital

Management of cash flow will be facilitated if a clear policy statement on the importance of cash flow is communicated throughout the business and a cash consciousness is promoted among all staff who collect or spend cash.

Although the person responsible for managing cash flow may not have responsibility for managing components of working capital, the role can include responsibility for monitoring and reporting ways in which working capital affects the cash flow of the business and its impact on profitability.

As a consequence, for appropriate management of cash within the business, the person responsible for managing cash needs to have a sound understanding of the operations of the business and be alert to seasonal influences or cyclical factors that may cause fluctuations in the need for working capital. A good cash flow forecast, together with the use of management financial ratios, will identify key areas where improvements to working capital can be implemented.

The management ratios that can be used to assess working capital include:

Days debtors

This ratio will indicate the average number of days taken to collect payments from customers. Cash flow can be severely impacted where the time taken to collect customer receipts exceeds the businesses standard payment terms offered to customers.

Days creditors

This ratio will indicate the average number of days taken to pay suppliers and other creditors. Where the business is paying earlier than the standard payment terms offered by creditors, then this is utilising cash that could be otherwise deployed on business operations.

Days stock

Where a business is utilising stock as part of business operations, then this ratio will indicate the average number of days taken to replace stock. This ratio can assist in determining if the business is holding large stock levels that are not being utilised (hence tying up cash) and aged stock.

Days work in progress (only applies to certain types of businesses)

This ratio will be used where a business is undertaking a "value adding" process to goods or services and there is a time lag between the receipt of those goods or service and when they are ready for sale. This time lag will add to the number of days in the working capital cycle. This ratio will assist in highlighting areas including "bottlenecks" in the process or poor delivery preparation.

Financing facilities

Various forms of financing available to the business will have different conditions and costs that must be considered in determining the most appropriate mix of external funding and equity.

The purpose and costs should reflect short-term needs, such as working capital, as well as long-term needs for capital expenditures and investments. Duration of need, continual availability and conditions or covenants all need to be assessed against the cost of each type of financing. Where more than one financing facility is utilised, then the maturity dates should not fall on the same day, as this could create risks when refinancing these facilities (all facilities require repayment or refinancing on same day). Financing facilities should be matched to the purpose of the loan (i.e. where financing non-current assets, then the term of the loan should match the useful life of the asset).

Maintaining close relationships with the business bankers and keeping them fully informed of the position of the business (both financial and operational) and possible funding requirements will assist in ensuring that loans will be available to meet contingencies when required. Regular communication in this way will give the banker greater confidence in your knowledge of the business.

Liquidity buffer

For businesses that experience regular or large cash flow fluctuations, consider a policy of maintaining a liquidity buffer. An example of the policy could be “a minimum liquidity buffer of \$x / % of committed facilities / \$ of liquid assets will be maintained to meet an unforeseen crisis.”

The policy may also justify how the liquidity buffer has been calculated, such as “x months of operational cash flow, or a percentage of debt maturing in the short-term, or simply a percentage of current committed facilities.”

Appendix B provides a checklist that can be used to assist in verifying the cash management processes of the business.

Conclusion

This guide has been prepared to assist all SMEs in managing the all important area of liquidity risk. It is imperative that a business understands its risk, where the potential liquidity risks are within their business and how to manage and monitor liquidity within the business. By utilising this guide, business will ensure that good practice liquidity risk management is included in the overall risk management framework of the business.

Appendix A: Preparing a cash flow forecast

Most businesses will prepare an annual profit and loss budget and, if exercising good financial management, will compare actual results to budget on a regular basis. Although the annual budget is the basis on which the cash flow forecast is prepared, cash should not be confused with profit. The cash flow forecast is developed on gross cash movements (including GST), however, it does not include non-cash items such as depreciation and amortisation. The cash flow forecast is all about the timing of cash movements and the impact on overall liquidity of the business.

For the best possible results, the cash flow forecast should be reviewed and revised regularly to take account of changing business conditions. While it is unlikely that the forecast will be one hundred percent accurate, the key to using this tool is to identify trends in working capital and possible financing requirements. A good cash flow forecast will provide an indication on the timing of a possible cash crisis and approximate levels of financing required.

Consideration should be given to preparing the cash flow forecast by either business units or divisions or by cash flow segments – that is separate preparation of sales forecast, capital expenditure forecast, operational cost forecast etc. It is essential that the assumptions used in the forecast align with the assumptions used in the annual budget and the strategic business plan. This will ensure that the cash flow forecast can be reviewed and updated when key assumptions to the business plan are amended.

As a preparatory to formulating the parameters for developing the cash flow it may be necessary to extensively analyse historical records to establish trends and highlight seasonal variations. This may need to be over a number of years and will assist in establishing a “feel” for the data and subsequent projections.

Details such as the way the weeks fall in a month, impact of the number of working days and when the last day of the month falls should be factored in, particularly if your client base has a significant number of small businesses. Important dates such as school holidays, public holidays and GST payment dates often impact on cash flows of the business (both cash inflows and outflows) and should be given due consideration when preparing the cash flow forecast.

Cash flow forecasts will generally be prepared on a monthly basis, aligning with the budget period. In volatile economic times, however, where there are significant cash milestones to be monitored, consideration should also be given to preparing a cash flow forecast on a weekly basis (this can

take the form of a subset of a monthly forecast) as there may be significant peaks and troughs within a month that may need to be addressed and monitored.

The forecast, once prepared and tested to ensure acceptable level of accuracy, can then be utilised to run various sensitivities (scenario planning) in line with budget and other operational planning undertaken by various areas in the business.

Sensitivities can include using possible changes to business or market conditions to identify the impact on cash reserves and liquidity buffers. These sensitivities can include disaster scenario (large volatile movements), worse case (expected outcomes not achieved) or minor adjustments to expected outcomes. In addition, the forecast can be utilised to assess cash flow impact on possible business opportunities.

In order to identify any possible liquidity risks, it is suggested that the cash flow forecast be developed on at least a twelve month “rolling” basis. This means that once the current time frame of the forecast has passed (this could be daily, weekly or monthly depending on the level of information required), and reviewed for variances to actual cash flow movements for that period, then a new period is inserted in the cash flow forecast – effectively ensuring that, at all times, the cash flow forecast provides twelve months of information. Some businesses may consider a forecast that has a longer cover of dates.

The most important aspect of preparing a cash flow forecast is to ensure that adequate time is spent comparing actual results to forecast and noting any significant variances. This will provide useful information on how the cash flow of the business is tracking and enable business owners and managers to implement proactive solutions to manage potential liquidity risk issues.

Appendix B: Checklist for managing cash flow and liquid assets

The following questions may provide a basis for seeking information that will be useful in verifying the cash management processes of the business. These questions are not exhaustive and may need to be supplemented by specific questions that are appropriate to the particular business.

Key elements of cash flow management

- Who has overall responsibility for cash flow management?
- Is there a clearly defined cash management policy?
- Are there procedures to identify and report any departures from policy and procedures for cash flow management?
- Does the business have a centralised or decentralised cash management system?
- Which persons are dedicated to the day-to-day management and monitoring of cash?
- Is there a system to review cash balances in decentralised locations so that surplus cash is identified and directed to projects on a global priority?
- Is there a well-developed sense of cash consciousness in each area that might have an impact on cash flow and handling of liquid assets?
- Are staff experienced and well trained in cash management techniques?
- Are sources of committed funding available as a buffer for unexpected requirements, to overcome timing differences or to accommodate short-term systemic fluctuations?

Annual budget

- Does the person responsible for managing the cash have responsibility for planning cash flow and participate in the development of the annual operating budget?
- Does the budget of gross cash receipts and payments for the financial year include capital expenditure, acquisitions, tax payments, drawings, dividends or investments?
- Has a buffer cash balance been calculated, taking account of the magnitude and timing of possible short-term unpredictable fluctuations in receipts or payments?

- Is there a current sensitivity analysis that indicates the effect on cash flow of varying levels of business activity?
- What is the worst case scenario and could the business survive under those conditions?
- Does the annual budget cash flow statement include details of available committed or uncommitted undrawn funding sources?

Cash flow forecasts

- Is the cash flow forecast, developed in the annual budget, revised frequently (daily, weekly or as appropriate) to reflect significant changes?
- Has senior management reviewed a monthly cash flow forecast for the financial year and has it been reconciled to the operating plan?
- Is there an effective communication system to advise the cash manager of unusual payments or changes in the amount and timing of receipts?
- What capital expenditures are planned and how are they to be financed?
- Are actual cash flows compared with forecasts and any significant differences investigated and explained so that, if appropriate, the forecasting process can be improved?
- Have extreme (unlikely but possible) scenarios been applied to ascertain weak points in the cash flow?

Management information reporting

- Does the accounting system provide for collecting and reporting key information in a format and frequency that promotes decision making?

Financial risk management

- Is adequate liaison maintained between the person assigned responsibility for managing the cash and staff responsible for management of the business' financing and risks?
- Has information relating to market risk been communicated so that hedging can be undertaken to stabilise related cash flows?

Associated costs

- Are there ongoing efforts to reduce transaction costs, including negotiation with banks and evaluations of new transaction techniques?
- Is there a watching brief to monitor developments and changes in legislation and technology that may affect the processes of cash flow management and related costs?

Liquidity and solvency

- Has a minimum buffer of cash reserves been determined based on previous experience of unexpected fluctuations in daily cash flow?
- Is there a strategy in place to obtain additional funding in an emergency?
- Is there a focus on cash flow forecasts that will prompt surpluses to be invested short-term, or even overnight, in order to earn a return on surplus funds?
- Have sensitivity analyses been prepared for differing levels of activity and their effects on cash flow in the medium to long-term?

Working capital

- Have performance standards been agreed for cash invested in inventories, accounts receivable and other current assets, and have clearly defined policies and objectives been set for accounts payable and disbursements?
- Are operating managers informed of the cost of holding excess inventory over agreed levels?
- Is there a report identifying delays in collection of accounts receivable balances which highlights the cost of overdue accounts?

Liquid assets

- Is there a clearly defined policy and objective for investing surplus funds and measuring the performance of this activity?
- Is there a policy defining the criteria for the use of short-term deposits?

- Does the daily banking system identify cash which is surplus to current requirements, so that such surpluses can be credited with interest or otherwise invested in appropriate short-term wholesale banking facilities (such as 11am cash deposits, bank bills etc.)?
- Are the values of liquid assets constantly monitored?

Financing and funding

- Where new funding needs to be included in the cash flow, is it committed or uncommitted?
- Have potential funding products been analysed to assess the most appropriate together with the best interest, fees and lending conditions?
- Have the banks or other sources of funding been consulted? Do they have enough information to give to gain approval in principle?
- Have you recently talked to a different bank to verify that your current bank is being “competitive” with interest rates and fees?
- Does the business prepare regular cash flow forecasts and use them to plan new and replacement funding requirements?
- How far ahead does the business plan new and replacement funding requirements? Are these plans reviewed for effectiveness?
- Does the term of the funding match the term of the asset being funded?
- Is the maturity of facilities and funding spaced out over time?
- Does the organisation receive regular briefings from their bankers on market conditions and funding opportunities?
- Have the costs of each financing facility been compared?
- Has any possible change of direction of the company been assessed for its impact on financing?
- Are there ways to restructure the business and reduce working capital needs?
- Does the business have unproductive or underutilised assets that can be converted into cash reserves?

Internal controls

- Are there adequate systems to monitor, measure and manage the daily collection and disbursement of cash and the daily investment of cash?
- Is the system of internal controls over cash collection and disbursements, cash investments and liquid assets assessed periodically to ensure it is effective?

