NOTE ON LIQUIDITY

FINANCIAL TRAINING PARTNERS

How to analyze a company's ability to meet financial demands

LIQUIDITY

Liquidity is the ability to meet financial needs whenever they occur. It means having access to enough cash to meet expected needs like operating costs, debt service, dividends, and capital expenditures. It also means having financial reserves to meet unexpected needs like legal judgments or the costs of natural disasters.

When a company has liquidity problems, the consequences can be severe. At best a liquidity problem strains relationships with suppliers, customers, and lenders; hurts the market value of the company's debt and equity; and damages its credit rating. At worst it can lead to debt defaults and bankruptcy.

USES OF LIQUIDITY

There are many ways a company uses cash. Among the most common uses of liquidity are:

Operations
Start-up and growth companies often do not generate sufficient cash from operations to fund their operating needs. For companies with highly seasonal sales, this shortfall may recur each year.

Working capital
For growing companies, net working capital[1] can be a major use of cash from year to year. In seasonal businesses, the build-up in net working capital before the peak period in sales can also be a sizeable use of cash.

Capital expenditures
Companies have a continuing need to spend cash on property, plant, and equipment. At a minimum, these are the outlays for maintaining fixed plant assets in competitive working order. For growing companies, capital expenditures may include outlays for plant expansion as well.

[1] Net working capital is current assets except cash and cash equivalents less current liabilities other than short-term debt and the current portion of long-term debt

Dividends
Shareholders of public and private companies often rely on dividends for income and as a key element in their investment returns. They are a high-priority use of cash for many companies.

Debt maturities
These include short-term debt and the current portion of long-term debt.

Operating contingencies
These are unpredictable cash outlays that do not occur in the ordinary course of business. Natural disasters, accidents, legal judgments, regulatory actions, product recalls, and the like can make large cash demands even when the company is insured against them.

Financial contingencies
These are unpredictable financial outlays that do not occur in the ordinary course of business. Examples are payments under financial guarantees and credit support arrangements, margin calls, and put options, all of which can make sudden demands on cash.

SOURCES OF LIQUIDITY

Companies get the cash they need from a variety of sources. Internal sources are those under their direct control, meaning cash generated by their operations and assets they own. The most common internal sources of liquidity are:

Free cash flow
Most mature companies generate cash from their operating activities. The value of free cash flow for liquidity depends on the stability and predictability of the company's cash flows.

Surplus cash
This is surplus cash most often held in the form of bank deposits and cash equivalents, which are investments with maturities of less than 90 days. Not all cash is surplus; some cash must be set aside for operating needs. Operating cash balances are usually 2-10% of sales, depending on how much cash the company uses in its daily business.

Marketable securities
These are short-term government notes, bank certificates of deposit, corporate commercial paper, or similar investments with maturities of 90 days or more. Their value as a source of liquidity depends on the credit quality of the issuer and their exposure to interest rate risk. Fixed-income securities and the securities of companies with non-investment-grade credit ratings have less liquidity value.

Surplus assets
These are assets that are not used in the company's operations. They may include obsolete equipment, unused real estate, unused copyrights, and the like. They may or may not have much value, but the company can sell them without affecting its operations.

Operating efficiencies
Companies can often eliminate jobs and shut down poorly performing operations. They can also reduce or defer capital expenditures. These steps may generate additional cash flow, but possibly at the expense of competitive position and long-term profitability.

Working capital efficiencies
Companies can collect accounts receivables more aggressively, reduce inventories, or slow payment on accounts payable. As with operating efficiencies, improvements are often hard to sustain over the long term.

Financial efficiencies
To conserve cash, companies may reduce or suspend dividends and share repurchase programs. Public companies are reluctant to cut dividends because it usually means a drop in the price of their stock; however, when investors are concerned about the company's liquidity, they tend to react positively to any measures to conserve cash. Private companies also may find it difficult to cut dividends, especially if the shareholders depend on them for income or to make tax payments.

Strategic change
If liquidity problems persist into the longer-term, companies may be forced to redefine their business strategy and focus on a smaller group of products or markets. They can raise cash by selling the operations that no longer fit into their new strategy.

External sources of funds are those outside the company's own operations and assets. They are the capital supplied by the banks, finance companies, and institutional investors that make up the loan, debt, and equity capital markets. The most common external sources of liquidity are:

Revolving credits
These are contractual commitments from banks and other financial institutions to make loans as long as the company meets certain conditions. Revolving credits can be a strong source of liquidity, as long as the financial covenants and other conditions in the credit agreement are not too difficult for the company to meet. The most reliable revolving credits come from financially sound banks with which the company has a strong relationship.

Lines of credit
Lines of credit are pre-approved credit limits from banks. The banks have no obligation to lend under them, they rarely have covenants or other conditions to lending, and they are often funded on a demand basis, meaning the bank can call for full repayment at any time even if the borrower is current on all payments. The stronger the company's relationship is with its line-of-credit banks, the more reliable those lines are as a source of liquidity.

Commercial paper
Commercial paper is a short-term debt security issued by investment-grade companies. Its availability is dependent on financial market conditions and very sensitive to investors' confidence in a company's credit quality. Commercial paper is not a reliable source of liquidity for most companies unless it is backstopped by

some other form of liquidity. Most common is a combination of cash, marketable securities, and unused committed revolving credit equal to 100% of commercial paper outstandings.

Debt capital markets

These include bonds, medium-term notes, asset securitizations, and private placements. They are not always sources of immediate liquidity, but they can be used to raise funds over a period of one to three months, provided the company's business fundamentals and capital structure are sound and markets are stable.

Equity markets

Equity is time-consuming and expensive to raise in the best of circumstances. For companies in financial difficulty, public equity funding is rarely available. Private equity may be available, but it is difficult to arrange and often very costly.

ACCESS TO LIQUIDITY

Timing is a factor in evaluating a company's access to liquidity. The focus of liquidity analysis is on meeting cash needs as they arise in the immediate future (up to 30 days). These are internal and external sources that can be tapped immediately, like operating efficiencies or borrowings under a committed revolving credit.

Beyond that, companies look to sources that take longer to access but can still be used in near-term (up to 90 days), like sale of surplus assets or public market debt. Sources such as strategic change or private equity may take even longer to access (up to 180 days).

Table 1. Access to Liquidity

	Sources	
Timing	Internal	External
Immediate	Surplus cash Operating efficiencies Working capital efficiencies	Commercial paper Lines of credit Revolving credits
Near-Term	Financial efficiencies Surplus assets	Medium-term notes Public bonds Public equity
Longer-Term	Strategic change	Private debt Private equity Sale or merger

A company's access to sources of liquidity also depends on its operating condition. Companies with good operating results and in sound financial condition have access to a wider range of sources than companies under financial stress. The advantage of internal sources is that they are accessible regardless of the company's condition.

Confidence-sensitive external sources like uncommitted lines of credit and commercial paper are seldom available to companies in financial difficulty. Even trade credit, which is usually considered to be an internal source, may be confidence-sensitive and unavailable in times of stress. The public debt markets and equity capital markets are seldom available to companies in financial distress, although the private debt and equity markets may be.

MEASURES OF LIQUIDITY

There are a number of ways to evaluate a company's liquidity. Conventional analysis emphasizes balance sheet measures. A more cash-flow-based approach to evaluating liquidity emphasizes measures like fixed charge coverage or the liquidity position. No single measure is ideal; each has its uses and limitations.

Current ratio

The formula for the current ratio is:

Current ratio = Current assets ÷ Current liabilities

The current ratio measures the excess of current assets over current liabilities. The numerator includes liquid assets like cash, cash equivalents, marketable securities, accounts receivable, and inventories. The denominator includes short-term obligations like accounts, interest, and taxes payable as well as current debt maturities. A value greater than 1.0 indicates the company can pay off current liabilities as they come due.

The current ratio has an important limitation. Increases in current asset balances will make the numerator increase, and the value of the ratio will go up. But the increase in assets will make cash flow from operations decrease, which is a use of cash and a reduction in liquidity. A growing current ratio may mean declining liquidity.

Another limitation is that in many industries the current ratio is naturally less than 1.0. In retailing, for example, current liabilities normally exceed current assets. Retailers have few accounts receivable because they sell mainly for cash, but they have accounts payable balances because they buy on credit from their suppliers. The current ratio is not a useful measure of liquidity for companies in such industries.

Some companies have operating strategies that may result in lower current ratios. Companies that manage inventory very efficiently carry low inventory balances, and companies that use supplier financing aggressively carry high accounts payable balances. Either or both of these practices may drive the current ratio below 1.0, but, because they boost cash flow from operations, they improve liquidity.

Quick ratio

The formula for the quick ratio is:

Quick ratio = (Cash + Marketable securities + Accounts receivable) ÷ Current Liabilities

The quick ratio measures the amount of cash and near-cash current assets available to meet current obligations. It includes only the most liquid current assets. A value greater than 1.0 indicates the company can pay off current liabilities as they come due.

The quick ratio has an important limitation. The ratio is not sensitive to the nature of the cash, cash equivalents, and marketable securities the company holds. Operating cash, customer deposits, cash held by creditors as collateral, cash in foreign bank accounts, illiquid securities may be in the numerator but not available to meet the bulk of current liabilities as they come due.

In reality…

Here are excerpts from Procter & Gamble's financial statements with the information needed to calculate the company's current and quick ratios.

Table 2. Current ratio, quick ratio, and cash flows

In millions	2010	2011	2012
Current assets			
Cash and cash equivalents	$2,879	$2,768	$4,436
Accounts receivable	5,335	6,275	6,068
Inventories	6,384	7,379	6,721
Other current assets	4,184	5,548	4,685
Total	$18,782	$21,970	$21,910
Current liabilities			
Accounts payable	$7,251	$8,022	$7,920
Other current liabilities	8,559	9,290	8,289
Debt due within one year	8,472	9,981	8,698
Total	$24,282	$27,293	$24,907
Current ratio	0.77	0.80	0.88
Quick ratio	0.34	0.33	0.42
Cash flow from operations	$16,131	$13,330	$13,284

Procter & Gamble is a leading consumer products company. It makes Tide detergent, Duracell batteries, Head & Shoulders Shampoo, Gillette razors, Crest toothpaste, and Pampers disposable diapers, along with 95 other brands. It sells them in 180 countries. In June 2012 the company had short-term credit ratings of A-1+/P-1and long-term ratings of AA-/Aa3.

Procter & Gamble normally has current and quick ratios of less than 1.0, which is common among consumer products companies. They manage accounts receivable collections intensively, which improves cash flow but reduces accounts receivable balances. They minimize inventories, which also improves cash flow but reduces inventories balances. They maximize financing from suppliers, and that increases accounts payable and cash flow.

Procter & Gamble's current and quick ratios have increased over the last three years, due mainly to rising cash and falling debt in 2012. Cash flow from operations fell as the current ratio rose, caused by declines in accounts payable and other current liabilities. The factors that drive the current ratio up tend to drive cash flow from operating activities down.

Fixed Charge Coverage Ratio

The formula for the fixed charge coverage ratio is:

Fixed charge coverage = (EBITDA + Rent) ÷ (Interest + Rent + Capital expenditures + Scheduled debt repayments + Dividends)

EBITDA is pre-tax income plus interest expense plus depreciation expense plus amortization expense (all for the prior 12 months). Rent is the prior 12 months' operating lease rental expense. Scheduled debt repayments are the prior 12 months' short-term debt and current maturities of long-term debt. Dividends include all common and preferred dividends paid in the prior 12 months.

The fixed charge coverage ratio measures a company's ability to make its key operating and financial payments from near-cash operating income adjusted for operating lease rental expense. A value of greater than 1.0 indicates the company is able to satisfy its operating and financial obligations without relying on external sources of cash.

The main limitation of the fixed charge ratio is that it does not include the effects of working capital. For companies with dynamic working capital needs, the fixed charge coverage ratio may overstate liquidity. But for companies whose operating results, capital spending, or dividend payouts are the main concerns, the fixed charge ratio can be an effective measure of liquidity.

In reality…

Here are excerpts from Procter & Gamble's financial statements with the information needed to calculate the company's fixed charge coverage ratio.

Table 3: Fixed charge coverage

In millions	2010	2011	2012
EBITDA	$18,922	$18,666	$16,758
Rent expense	305	282	264
Interest expense	946	831	769
Capital expenditures	3,067	3,306	3,964
Scheduled debt repayments	16,320	8,472	9,981
Dividends	5,458	5,767	6,139
Fixed charge coverage	0.74	1.02	0.81

The company's fixed charge coverage was at or slightly below 1.0 throughout 2010 – 2012. EBITDA is low, especially compared to scheduled debt repayments. Increases in capital spending and dividends also contributed to the low fixed charge coverage.

This was not a serious problem for Procter & Gamble. Much of the short-term debt in scheduled debt repayments was commercial paper: $5.0 billion in 2010, $7.8 billion in 2011, and $7.0 billion in 2012. Relying on its A-1+/P- short-term credit ratings, the company's financial strategy was to refinance all or most of its commercial paper rather than repay it. Without commercial paper, fixed charge coverage was 0.91 in 2010, 1.75 in 2011, and 1.20 in 2012.

Liquidity Position

The formula for a company's liquidity position is:

Liquidity position = Liquidity reserve – Short-term debt – Current portion of long-term debt

Where:

Liquidity reserve = Surplus cash + Liquid marketable securities + Unused committed borrowing capacity

Surplus cash is cash and cash equivalents excluding operating cash balances. Liquid marketable securities exclude fixed income securities maturing in more than one year and securities from issuers with a credit rating of less than investment grade. In the absence of details about cash or investments, assume all cash is operating cash and all marketable securities are liquid, short-term, floating-rate, and high-credit-quality investments.

Unused committed borrowing capacity means the total amount of any committed revolving credit facilities not due to expire within the next three months[2] (reduced by any seasonal or borrowing base limits on availability) less all loans and letters of credit outstanding under the facilities.

Short-term debt is notes payable and any other short-term borrowings and letters of credit usage not made under or directly backstopped by the company's committed revolving credits. The current portion of long-term debt is the maturities of long-term debt due within the next 12 months. Short-term debt and the current portion of long-term debt should exclude any commercial paper outstandings, since they are already factored into the calculation of committed borrowing capacity.

The liquidity position measures a company's potential sources of liquidity under stress but before default on its loan agreements. It focuses on sources of funds available through the near-term, net of the uses of funds management is least able to cut in the near-term. It assumes that no covenant or other default prevents the company from borrowing under its committed revolving credits.

It is important to evaluate a company's liquidity at the point of its peak expected needs, when needs are highest and free cash flow is weakest. For a seasonal company, this is the period right before the start of its peak selling season. This may involve using monthly, quarterly, and annual cash flows and cash flow forecasts.

A liquidity position with a value greater than zero indicates a company has adequate liquidity as long as cash flows are stable and there are no unanticipated needs. But cash flow can be volatile, especially for companies whose business risk is high. Operating and financial contingencies can make unpredictable demands on cash.

The strongest liquidity positions have enough reserves to absorb any unexpected drops in free cash flow and to cover any contingent payments. Companies with potentially volatile cash flows include those that are highly cyclical, face intense competition, are going through major strategic change, or have high exposure to currency or interest rate risk. Companies with potentially high contingencies include those that face legal or environmental judgments, rely on confidence-sensitive trade or counter-party credit, or have issued financial guarantees.

[2] The three-month limit includes any options the borrower has to convert borrowings to a term loan

In reality…

Here are excerpts from Procter & Gamble's financial statements with the information needed to calculate the company's liquidity position.

Table 4: Liquidity position

In millions	2010	2011	2012
Cash and equivalents	$ 2,879	$ 2,768	$ 4,436
Credit commitments	11,000	11,000	11,000
Loans and letters of credit	0	0	0
Debt due within one year	(8,472)	(9,981)	(8,698)
Liquidity position	$ 5,407	$ 3,787	$ 6,738

Procter & Gamble's liquidity position changed as its cash and debt balances changed. The main reason for the increase in cash in 2012 was $2.9 billion in proceeds from the sale of the company's snacks business. Debt fell in 2012 due to a decrease in the current maturities of long-term debt.

The largest and most stable source of liquidity was $11.0 billion in committed revolving credits from a syndicate of banks. There were no loans or letters of credit outstanding under the revolving credits, so they were fully available for Procter & Gamble to use. The revolving credits have no cross-default, ratings downgrade, or material adverse change provisions, which could allow the banks to cancel their commitments.

With so many established products in so many markets, cash flow is not very volatile. The biggest operating contingency is a product recall, and those can be costly: Johnson & Johnson's recall of Tylenol in 2010 cost as much as $600 million by some estimates. The biggest financial contingency is a credit rating downgrade that would make it difficult for Procter & Gamble to refinance maturing long-term debt: there is $4.1 billion in long-term debt due in 2013.

Evaluating a liquidity position is a matter of judgment. It seems likely the company has enough liquidity to meet those potential needs. A liquidity position of $6.4 billion probably is more than enough to cover long-term debt maturities, potential product recalls, and an increase in cash flow volatility.

FINANCIAL FLEXIBILITY

Financial flexibility is the ability to meet long-term needs for cash in a timely manner without excessive costs and without disrupting a company's financial strategy. Financial flexibility has two components: debt maturities and capital market access.

Debt maturity profile

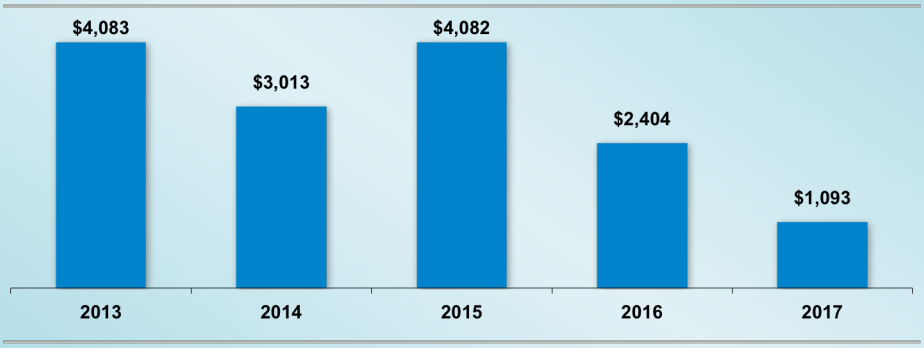
Leverage and coverage ratios analyze the impact of total debt, but they do not deal with the timing of debt obligations. Companies with too much long-term debt coming due at the same time lack flexibility. They are over-exposed to credit risk and to market risk.

Operating difficulties may distort future cash flows, clouding the company's credit picture. If that happens at a time when debt maturities are high, the company may have trouble meeting its debt repayment schedule or refinancing the maturing debt. If it happens when committed credit lines expire, there may be difficulty renewing or replacing them.

Conditions in the credit markets may block a refinancing or a renewal even when the company is a good credit. Defaults by other borrowers may affect the availability of confidence-sensitive sources like commercial paper. Banks and bond investors may choose to reduce exposure to entire industries in reaction to economic cycles or as the result of changing portfolio strategies.

In reality…

Here is the information from Procter & Gamble's financial statements needed to evaluate the company's debt maturities.



Procter & Gamble has $21.1 billion in long-term debt outstanding, and $14.7 of it matures in the five years between 2013 and 2017. There are concentrations of debt maturities in 2013 and 2015, but no more than 20% of its debt is due in any year. Given the company's high credit ratings and good liquidity, it has more-than-adequate financial flexibility.

Capital Market Access

Companies with good capital market access can raise money from external sources in a timely manner and at favorable costs. To raise funds as quickly and efficiently as possible, the company's financial managers must be familiar with market underwriting standards and practices. To respond quickly and with good pricing and terms, lenders and investors need to be familiar with the company's management, plans, competitive position, and outlook.

Companies should borrow from as many different classes of investors as they can manage efficiently. For smaller, higher-risk companies, this might only be the bank, equipment and construction finance, and private equity markets. For larger, lower risk companies, this might be the commercial paper, bank, and domestic and international bond and equity markets.

A company's ability to access the debt capital markets depends on investors' and lenders' perceptions of the company's credit quality. Investment grade companies can generally issue efficiently priced debt quickly, as long as the additional debt does not materially impact its credit quality. The availability and price of debt for non-investment grade or non-rated borrowers is more volatile.