

# Journal of Hospitality Financial Management

## The Professional Refereed Journal of the International Association of Hospitality Financial Management Educators

---

Volume 16 | Issue 1

Article 12

---

2008

# A Comparison of Static Measures of Liquidity to Integrative Measures of Financial and Operating Liquidity: An Application to Restaurant Operators and Restaurant Franchisors

Linda Canina

Steve Carvell

Follow this and additional works at: <https://scholarworks.umass.edu/jhfm>

---

### Recommended Citation

Canina, Linda and Carvell, Steve (2008) "A Comparison of Static Measures of Liquidity to Integrative Measures of Financial and Operating Liquidity: An Application to Restaurant Operators and Restaurant Franchisors," *Journal of Hospitality Financial Management*: Vol. 16 : Iss. 1 , Article 12.

Available at: <https://scholarworks.umass.edu/jhfm/vol16/iss1/12>

This Refereed Article is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Journal of Hospitality Financial Management by an authorized editor of ScholarWorks@UMass Amherst. For more information, please contact [scholarworks@library.umass.edu](mailto:scholarworks@library.umass.edu).

A Comparison of Static Measures of Liquidity to  
Integrative Measures of Financial and Operating Liquidity: An Application to Restaurant Operators and  
Restaurant Franchisors

**Abstract**

The results presented in this paper show that integrative financial and operating measures of liquidity provide investors and creditors with additional information beyond that provided by static measures of short-term liquidity such as the current and quick ratios. Analyzing a sample of restaurant firms over the period 1994-2003, our analysis of these dynamic measures of liquidity provide a drastically different view of short-term solvency than those produced from the static measures. Specifically, the static measures of liquidity imply that restaurant companies are not liquid. However, restaurant companies, when evaluated under this integrative framework, were shown to be more liquid based on their financial and operating liquidity than their current and quick ratios implied. Thus, financial analysts, creditors and managers should evaluate both dynamic liquidity measures as well as static measures in their evaluation of the risk associated with covering their short-term obligations when evaluating the short-term financial liquidity and short-term credit worthiness of firms. In addition, careful attention should be paid to both financial and operating measures of liquidity to establish what changes, if any, have occurred in a company's liquidity position over time. This is an important finding for managers and investors in all industries since short-term illiquidity implies a high risk of default if the banks refuse to refinance all or part of the debt. This in turn may impact the cost of short-term financing and may result in an impact on their overall financing costs and required returns from equity investors.

## **I. Introduction**

Liquidity measurement is an important part of financial statement analysis, particularly in short-term credit evaluations as a component of assessing credit worthiness and the likelihood of short-term solvency. Therefore, the accurate measurement of a firm's liquidity is important to both creditors and investors as they consider short-term default risk in their calculations of short-term borrowing costs, credit worthiness, cost of capital and valuation. Short-term liquidity measures such as the current and quick ratios are considered key liquidity measures by financial analysts and creditors. In fact, they are the most commonly employed measures of a firm's liquidity (Kamath, 1989). These measures emphasize a static approach to liquidity analysis because they only consider the firm's stock of liquid resources. There exists another source of liquid resources available to the firm in meeting its short term obligations. That is the flow of liquid resources available from operations. Operating cash flow coverage is a crucial element in liquidity analysis that is often ignored. Hence depending solely on the measurement characteristics of static ratios may overstate or understate the overall short-term liquidity of the firm.

In this regard, the adequacy of static liquidity measures such as the current and quick ratios have been questioned by many researchers. The static ratios measure the short term liquidity of the assets but they focus on the solvency of the firm in the case where the company may liquidate, not the liquidity provided from financial assets and operations for the company as an on-going concern. In this paper other measures of liquidity are described and compared. These other liquidity measures estimate separately the financial and operating liquidity of the firm as an on going concern unlike the most commonly used static measures of liquidity.

The appropriate measurement of short-term liquidity is critical to the financial management of any firm. Operating liquidity plays an integral part in establishing short-term financial risk. As a

result of the potential inadequacy of the use of static measures of liquidity, this paper applies an integrative approach to the analysis of liquidity. The integrative approach breaks down liquidity into two components: financial liquidity and operating liquidity. Hence, the extent to which the firm's potential short-term obligations are covered by both its stock of liquid financial assets as reported on the balance sheet as well as its flow of liquid resources provided as a result of operations are identified separately.

The analysis presented in this paper compares the static measures of liquidity to the integrative financial and operating liquidity measures in order to determine whether the integrative measures provide any additional information regarding the liquid reserve of the firm beyond that of the static measures. First, two of the most common static measures of liquidity are discussed along with an analysis of the potential problems associated with them. This is followed by an explanation of the integrative approach to liquidity analysis. Then a comparison is made across the various measures of liquidity for a sample of restaurant operators, and restaurant franchisors.<sup>1</sup> The paper ends with specific suggestions for analysts, investors and executives involved in short-term liquidity analysis.

## **II. Measures of Liquidity**

A liquid reserve is maintained in order to meet cash obligations as they come due. If not enough cash is available a firm may have to delay payments, obtain temporary financing at unfavorable terms or even sell assets. An adequate liquid reserve protects management from having to undertake these costly actions. The purpose of liquidity analysis is to provide managers, financial analysts and creditors an indication of the adequacy of the liquid reserve. In order to fulfill this goal a liquidity measure must possess at least the following two characteristics. First, the measure should convey information about the likelihood that a firm will be able to meet its cash requirements. That is,

---

<sup>1</sup> Note that the comparison is relative to the measures not relative to the three samples.

a firm with a high value for the liquidity measure will have a high likelihood of meeting its cash obligations and hence has adequate reserves. Second, it must only incorporate resources that are truly liquid, in other words those assets quickly and easily convertible into cash and whose use does not disrupt the operations of the firm. Next, the characteristics of various measures of liquidity in light of the desirable characteristics of a liquidity measure as described above are examined. First some of the most common static measures of liquidity are discussed.

### **Static Measures of Liquidity**

The most commonly suggested methods of evaluating liquidity by managerial accountants are ratios such as the current ratio and the quick ratio. The current ratio is defined as: current assets divided by current liabilities. While the quick ratio is defined as: current assets less inventory divided by current liabilities. Liquidity ratios such as the current ratio and the quick ratio, as well as others such as the acid test ratio are designed to capture the firm's liquidity based on the premise that liquidity is measured as the ratio of some or all of the firm's current assets against the current liabilities that the firm is carrying. In other words these ratios implicitly state that the firm's current liabilities are "covered" with the firm's current assets ranging from cash to inventory and accounts receivable. These ratios have one real advantage to the user, they are fairly simple to interpret: the higher the ratio the less likely that the firm will need to seek external sources to cover current liabilities. For example, a firm with a current ratio of two would be able to see the value of its current assets (such as cash, cash equivalents, marketable securities, inventory and accounts receivable) decline by as much as 50% of their book value and still be able to "cover" their current obligations to short term creditors without looking toward liquidating their fixed assets or seeking expensive external financing to cover these obligations.

These types of liquidity measures presume that an asset is liquid if it can be turned into cash quickly, easily and without an appreciable loss. Assets are listed on the balance sheet in the order of their liquidity which means that the most liquid asset is listed first. Therefore, cash is by definition the most liquid asset while a building is considered to be somewhat illiquid; as it might be sold and turned into cash quickly and easily, but would only be done so if the owner were willing to incur a substantial probability of financial loss in the rapid liquidation of the asset. Other assets have varying degrees of liquidity, with inventory and accounts receivable being typically more liquid and equipment being typically less liquid. While measuring the delay between and potential for appreciable loss during an asset's transformation into cash is an estimate, the concept behind assessing and ranking the liquidity of assets held by a company in this way is generally agreed upon (Emery, 1984).

The two main problems with this static category of liquidity measures is: first, the magnitude of the measure does not always provide accurate information about the likelihood that a firm will be able to meet its cash requirements because it may incorporate financial resources that are not easily convertible into cash without loss of value; and second, they do not distinguish between the assets and liabilities that are tied up in operations and are therefore necessary for the ongoing operations of the firm. It may be argued that higher ratios do protect creditors from loss severity after liquidation. That is after the firm disposes of its assets it then uses the proceeds to repay its obligations. However, this is only true in so far as the firm's current assets are liquidated at or close to full book value. There are two issues here; first, with the exception of cash, current assets like accounts receivable and inventory rarely are sold for book value during liquidation. The fair market value at which they can be sold may be quite different from their historical book value. The second issue has to do with how the law treats the firm's liabilities under Chapter 7 liquidation. After liquidation most current liabilities are quite far down the priority list for payment established by bankruptcy law. Therefore, the idea that unsecured

accounts payable and notes payable would, in reality, receive a reasonable portion of the value of the liquidated current assets is questionable. The issue of liquidating at book value combined with the issue of priority is the reason why creditors and investors prefer that the firm's current and quick ratios far exceed one. If the ratio is 2 or higher this increases the probability that the firm's current assets will be sufficient to repay current liabilities following liquidation, even given the concerns outlined above.

Another problem with standard liquidity ratios lies in the assumption that higher current ratios are positive signals for a company's short-term financial well being. For example, an increasing current ratio may be caused by an increase in accounts receivable generated not by increased sales but rather by an increase in the age of the average account held by the firm. If the latter is true, the fair market value of the accounts receivable is actually declining because delinquency rates generally increase as the age of the accounts receivable increases thereby reducing the fair market value of this current asset. Under this condition the firm is actually less likely to cover its current liabilities, not more, even though its current ratio is increasing. The same can be said for the impact of rising inventory on the current ratio. If inventory is increasing in response to increased unsold goods, then the fair market value of these goods is likely to be substantially lower than the stated book value. Again, in this case the higher current ratio is a reflection of a lower not a higher level of liquidity.

Steve – the reviewers and we probably agree that it is not a good idea to compare ratios across industries. Finally, when comparing these ratios across industries, some types of businesses, by their nature, will hold less accounts receivable and inventory than others. The fact that firms across industries may have lower or higher current ratios does not necessarily imply that they are less or more liquid. For instance, a firm in the services sector, such as a restaurant, may hold lower amounts of inventory than a manufacturing firm by nature of their business. Also, some businesses, such as

those engaged in business-to-business transactions, may have very high levels of accounts receivable while others engaged in business-to-consumer transactions, may have very low levels of accounts receivable. In addition, since current assets do not generate a return on investment, financial-economic models, such as the Economic Ordering Quantity or EOQ model (Baumol 1952), always seek to minimize the current assets held subject to the firm's operating constraints. As a result of these optimization models, some firms will be able to maintain lower levels of current assets without violating their operating constraints and will therefore tend to have lower current ratios. This does not make them necessarily less liquid nor does it imply that they have a higher level of financial distress risk. In fact it may imply that more efficient and profitable companies are the ones that have lower levels of current assets and therefore lower current and quick ratios.

Overall, the current and quick ratios provide an incomplete and potentially inaccurate assessment of the firm's liquidity as an ongoing concern even though they are of some use for assessing the value of current assets under conditions of liquidation. Ratios such as the current ratio and the quick ratio are more appropriately categorized as liquidation ratios and not liquidity ratios. While the distinction may sound semantic, the difference is critical to the accurate assessment of a firm's incremental financial risk imputed by its higher levels of liquidity risk. To accurately assess liquidity the current assets and liabilities used in the firm's operating cycle need to be differentiated from those current assets and liabilities that are not directly related to the firm's operations since the former do not represent liquid assets as long as the firm is actively engaged in an on-going business. What is needed is a measurement technique that considers the liquidity of on-going current assets used in the operating cycle separately from the other current assets held by the firm. The integrative approach to liquidity analysis, explained next, is designed to accomplish just this goal.

### **Integrative Measures of Liquidity**

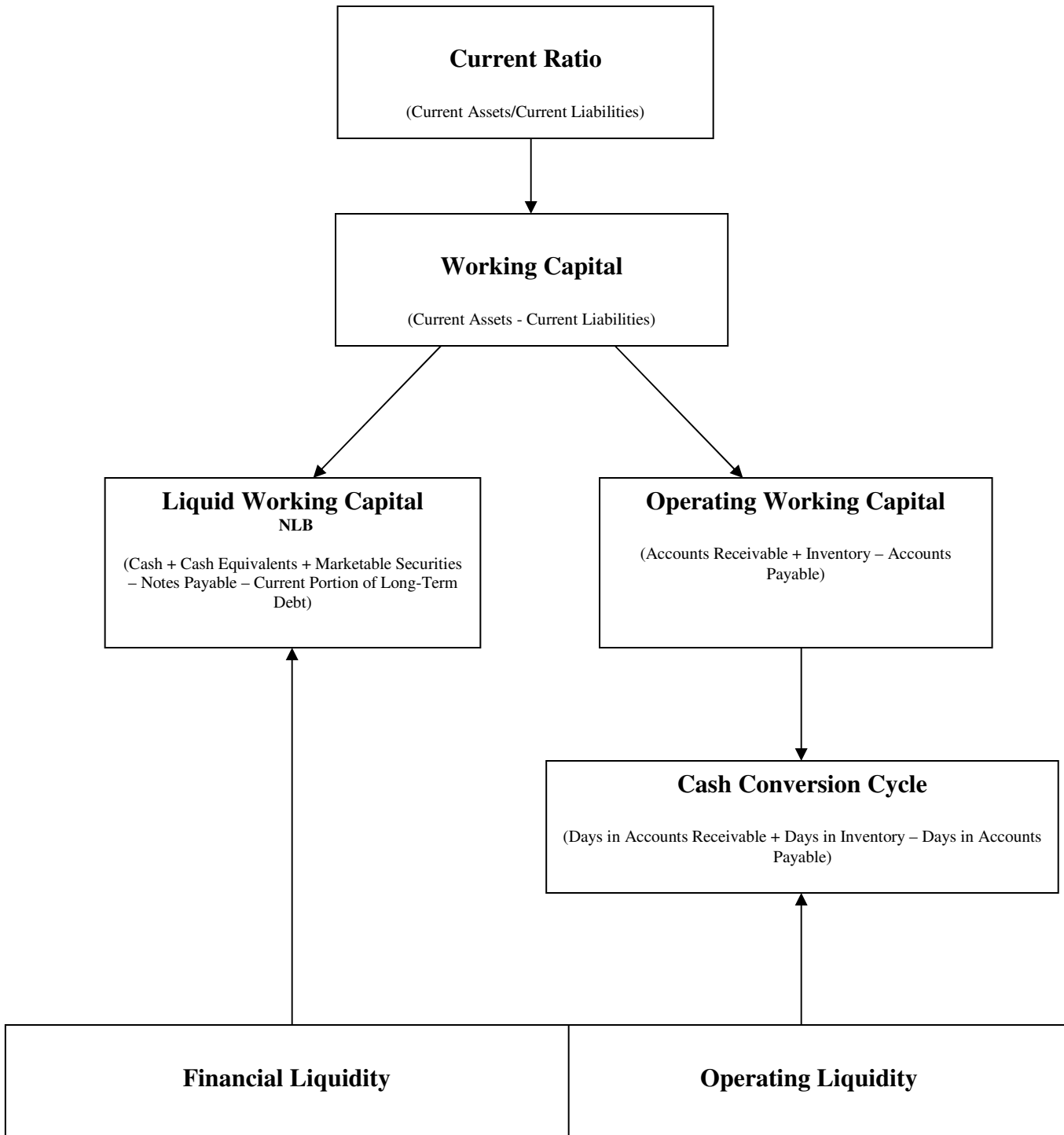


Measuring the liquidity of a firm's operations as opposed to the liquidity of its assets or specific asset accounts is quite a different matter. Firm liquidity measures are used to assess how liquid the firm is as far as its operations are concerned not the liquidity of the firm after it has sold off its current assets that are needed to maintain operations. In so doing these measures should be able to provide investors and creditors with information regarding the ability of the operations to sustain the firm without the need to liquidate productive assets or find external capital to fund operating needs. The Integrative Approach, first characterized by Shulman and Cox (1985) and Shulman and Dambolena (1986) categorizes the underlying balance sheet accounts of net working capital (NWC) into two distinctive components; one that focuses on financial liquidity and one that focuses on operating liquidity. This method provides financial analysts, investors and creditors with a measure of the liquid balance of financial assets after operational needs have been met.

The first step in measuring the liquidity of the firm's operations is to breakdown the firm's NWC measure, an accounting item closely related to the firm's liquidity as measured by the current ratio, into two distinctive components: the financial component and the operating component. The financial component of the firm's NWC is the net liquid balance (NLB) while the operating component of the firm's NWC is the working capital requirement (WCR). The process of transforming the firm's current ratio, which is a liquidation measure, into a disaggregated measure of the firm's operating and financial liquidity is summarized in Figure 1 below.

**Figure 1**

**Disaggregating Liquidity**



The liquid working capital component of NWC, also known as the NLB, is the liquid balance of financial assets after operational needs have been met and it is defined as financial current assets less financial current liabilities. Financial current assets are cash plus marketable securities and cash equivalents while financial current liabilities are equal to notes payable plus the current portion of long-term debt. As a result, NLB provides a direct link to the firm's liquidity position by measuring a firm's ability to cover financial current liabilities with the use of financial current assets. Since NLB does not include current assets tied up in operations, such as accounts receivable or inventories, higher levels of NLB always imply greater financial liquidity unlike higher levels of the current ratio.

The operating component of the firm's NWC, the WCR, is defined as operating current assets less operating current liabilities. Where operating current assets are defined as inventory plus accounts receivable and operating current liabilities are defined as accounts payable. This means that the WCR is equal to inventory plus accounts receivable less accounts payable. As discussed previously, an increasing level of the firm's current ratio and therefore its WCR caused by growing inventory or accounts receivables does not always imply that the firm is more liquid, in fact at times, it would more than likely imply the opposite.

As a result, the WCR is not useful in its current form to measure the firm's operating liquidity directly as it consists of operating current assets that are tied up in the operating activities of the firm and are therefore not available to cover financial obligations. Furthermore since it is a static measure it does not measure both the timing and size of the cash flows which really determines the extent to which operations of the firm are liquid. What is needed is a mechanism of transforming the static measure of operating liquidity represented by the WCR into a dynamic measure of liquidity that captures the liquidity of these assets and liabilities in an on-going operational setting. Richards and Laughlin (1980) suggest the use of the cash conversion cycle (CCC) as a dynamic or a flow measure

of operating liquidity. This flow measure of operating liquidity better incorporates both the timing and size of the cash flows. The process of transforming the WCR component of the firm's NWC from a static measure into a dynamic measure in order to create an indicative assessment of the firm's operating liquidity is presented next.

First, remember that WCR is defined as inventory plus accounts receivable less accounts payable. If each of these accounts is examined in a dynamic setting then it is possible to see that WCR is directly related to the cash conversion cycle (CCC). The CCC measures the amount of time, in days, that it takes the firm to transform cash spent to purchase inventory for sale into cash collected from those sales. The CCC is defined as the inventory conversion period (ICP) plus the accounts receivable collection period (RCP) less the accounts payable deferral period (PDP). Where the ICP equals the number of days that the average inventory is held until it is sold; and, the RCP is the number of days that the average accounts receivable takes to be collected. Together, the firm's ICP plus the RCP equals the firm's operating cycle and represents the amount of time that the firm's operations take to turn inventory into finished goods, sell them and collect the cash from those sales. Finally, it must be recognized that cash does not go out from the firm as soon as the inventory is purchased instead the firm typically assumes an accounts payable. The period of time between purchasing the inventory until the accounts payable is settled for cash is the accounts payables deferral period (PDP). Subtracting the PDP from the firm's operating cycle gives us the CCC which is the appropriate measure of operating liquidity. The CCC is the measure that is used in the integrated model of the firm's liquidity to connect the firm's WCR to a measure of operating liquidity.

In sum, it is apparent that the NLB and the CCC are appropriate measures of the firm's respective financial liquidity and operating liquidity as an ongoing concern; whereas the current ratio and other static liquidity ratios measure the working capital cushion in the event that the company fails and its current assets are liquidated. The NLB and the CCC are linked to the current ratio but differ in that they only include the financial and operating liquidity components of NWC available while the firm continues to operate. In the next section, each of these measures is compared.

### **III. The Data Sample**

The primary data sample consists of all publicly traded restaurant and manufacturing companies with annual financial statements available on the Compustat database over the ten year period from 1994-2003. The four-digit SIC code, 5812 (Restaurants and Eating Places) was used to identify the sample firms. This provided a total of 111 restaurant companies in the sample with financial reports available during the ten year sample period. Using the description of business variable in Compustat the sample of restaurant companies was separated into two groups, those firms that were owner-operated and those that were engaged in franchise activities. The sample consists of 36 firms primarily engaged as owner-operated restaurant companies and 75 firms restaurant companies engaged in franchising activities. The owner-operated restaurants were separated from the franchise restaurants because franchise restaurant companies have a different business model, one of running a franchise operation as opposed to a restaurant operation. As a result, there are differences in their asset and liability accounts. For example, restaurants have low inventory and receivables while restaurant franchisors may also have low inventories but may tend to have higher levels of receivables from franchise fees due. By analyzing these two groups separately, it is possible to show the importance of analyzing various measures of both operating and financial liquidity regardless of the business structure. That is the results are not specific to restaurant operators.

In order to show that the results are not specific only to restaurant operators and franchisors, each of the liquidity measures for a sample of manufacturing firms was also examined. Manufacturing firms represent a major force in the U.S. economy and understanding the impact of accurately assessing liquidity for these firms would be a critical test of any liquidity measurement framework. For instance, manufacturers typically have both high levels of inventory and receivables unlike the restaurant operator group as well as the restaurant franchisor group. The two-digit SIC codes, 20 through 39 were used to identify a broad sample of manufacturing firms. This resulted in a total of 2380 manufacturing firms in the sample with financial reports available during the ten year sample period. To provide an indication of the relative sizes of the firms involved in the study average total assets and average annual sales are presented for the sample in Table 1 below.

<b>Table 1</b>			
<b>Average Total Assets and Sales</b>			
<b>Firm Type</b>	<b>Number of Companies</b>	<b>Average Total Assets</b>	<b>Average Annual Sales</b>
		<b>(Million Dollars)</b>	<b>(Million Dollars)</b>
<b>Restaurants</b>			
Owner operated	36	\$313.39	\$477.95
Franchisors	75	\$310.38	\$498.75
<b>Manufacturing</b>	2380	\$1,896.33	\$1,779.48

As can be observed by the both the average total assets and average annual sales the two groups of restaurant companies are fairly close in size. The owner operated restaurant companies have average asset values of \$313.39 million, slightly higher than the \$310.38 million average asset values for the franchisors. The numbers for average annual sales are similarly close for the two restaurant groups. The owner operated restaurant companies have average annual sales of \$477.95 million, slightly lower than the \$498.75 million average annual sales for the franchisors. The values of both average annual sales

and asset values for the sample of manufacturing firms are significantly higher than those of the restaurant sample with values approximately four times as high in both categories. The fact that our restaurant samples have similar sizes makes comparisons of liquidity and the cost of financing operating liquidity fairly straight forward. The size differential between manufacturing firms and the restaurants is only an issue for the values of the firms' NLB as the CCC is reported in days not dollars and the current and quick ratios are already normalized. To account for the differences in the dollar values of the NLB both the raw values and the values adjusted for size using NLB divided by total assets as the comparison statistic are reported.

For each company in the sample, across the sample period, the measures of liquidity discussed above were calculated, the current and quick ratios, as well as the NLB and CCC to ascertain if there were any differences in the firm's liquidity as it relates to the metric of liquidity employed. In addition, the opportunity cost of holding the operating working capital was estimated for each firm in order to determine the economic cost imposed by the firm's decision to hold operating current assets. While maintaining liquidity has positive signaling benefits regarding the firm's short-term financial risk, the cost of holding operating working capital has a negative impact on the value added of the firm in direct proportion to the economic cost of holding unproductive operating working capital. The results are presented next.

#### **IV. Results**

Table 2 shows the current and quick ratios for each of the three groups of firms in our sample. When the standard static measures are examined to assess the firms' liquidity then manufacturing firms appear to be the most liquid, having current and quick ratios well above 2. The restaurant franchisor and restaurant owner-operator groups on the other hand seem to be quite illiquid. The current ratio for the restaurant franchisor group is barely above one. While the current ratio for the

restaurant operator group is below one. In addition, the quick ratios for both the restaurant franchisors and restaurant operators are below one. These findings seem to bear out the presumption that firms engaged in either restaurant operations or franchising have high levels of short-term financial risk as measured by the commonly employed liquidity measures.

<b>Table 2</b>			
<b>Current and Quick Ratios 1994-2003</b>			
	Restaurant Owner Operators	Restaurant Franchisors	Manufacturing Firms
Current Ratio	0.9201	1.0053	3.5211
Quick Ratio	0.7374	0.8431	2.7223

These results, however, do not show the whole picture. As discussed above, higher current and quick ratios do not, necessarily, imply that firms are liquid. In fact, the ratios due to their poor construction and the economics of holding current assets may provide perverse results. To gain a clearer picture of liquidity and the financial risk imposed on firms as a result thereof, the current ratio was disaggregated into the CCC (operating liquidity) and the NLB (financial liquidity). In so doing it is possible to determine whether the source of any illiquidity lies in its operations, i.e. it's operating liquidity, or in it's financing, i.e. it's financial liquidity.

The results in Table 3 provide a strikingly different picture of liquidity for the three groups of firms in our study than those seen in Table 2. First, it is shown that the measure of operating liquidity, CCC, provides evidence that the group of firms comprising the restaurant owner operators is the most liquid with a CCC of -2.764 days compared to restaurant franchisors with a CCC of 29.892 days and manufacturing firms with a significantly higher 120.339 days. Note that the current and quick ratios were very similar for the restaurant owners and the restaurant franchisors while their operating



liquidity is somewhat different. Here the manufacturing firms, that appeared to be quite liquid when measured by the current and quick ratios, show them to have a substantial amount of illiquidity in their operations. Remember that the CCC, the preferred measure of operating liquidity, calculates in days the period between when cash is collected in the operating cycle and when it is dispersed from accounts payable. A positive number implies that the company takes more days to collect its cash than it has used to defer payments to their current account payable creditors. A negative number implies that the company is transferring cash through their operating cycle in fewer days than they are taking to pay off their accounts payable. For the CCC the shorter (or lower number of days) the better and having a negative number implies that the company's operating cycle is very short compared to its payable deferral.

A negative value is quite rare for the CCC since this requires that the sum of both the inventory conversion period and the receivables collection period to be less than the payables deferral period. One might expect there to be a fairly close mapping of the payables and receivable periods since they represent the flip side of the same coin in a business relationship. Even if a firm can manage to collect receivables in a timelier manner and delay payables there is still the time necessary to transform inventory into finished goods and sell them. The addition of the inventory conversion period to the receivable collection period makes it difficult to find instances of negative CCCs.

As shown in Panel B of Table 3, both the restaurant owner operators and manufacturing firms, are collecting their accounts receivables faster than they are paying out their accounts payables on average. Unfortunately for the restaurant franchisors this is not the case. The reason lies in the nature of the restaurant franchisor firms' relationship with their accounts receivable creditors. Accounts receivables for the restaurant franchisors are the company's franchisees. Collecting fees in these environments often take longer as the payment value is based not on a good or service transaction but

on reported sales over the previous period and therefore will take longer to agree upon and collect. Restaurant owner operators have a distinct advantage here over their franchisor counterparts. Owner operators collect cash for their sales while franchisors must wait for their franchisees to determine the amount owed and remit. Our group of owner operators has a very low receivables collection period because of this fact, the only reason they do not have an effective zero collection period is due to the fact that some firms in this group have a few franchisees and some have corporate accounts that pay on credit terms. However, the fact that this group's days in receivables is between 57 and 80 days shorter than the franchisor and manufacturing firms respectively is one of the main reasons for the negative cash conversion cycle observed here. This explains why restaurant owner operators are very liquid when the focus is on their operating liquidity and provides a very different story than found when liquidity is examined using either the current or quick ratio.

The financial liquidity as measured by the NLB provides further evidence that restaurant owner operators and franchisors are not less liquid than manufacturing firms. Remembering that the NLB should be positive under the assumption that a firm should have sufficient cash on hand to meet its short-term financial obligations from notes payable it is found that all firms in the sample have quite reasonable buffers between their short term financial obligations and their cash on hand to meet those obligations. This is true whether the raw dollar amount or the percent of the NLB buffer against total assets is examined. However, while it has been shown that both restaurant franchisors and operators have similar NLB, manufacturing firms have a much higher level at about 8-10 times the NLB of restaurant owners and franchisors. Once size differences are controlled for by dividing the NLB by total assets, financial liquidity across the three groups is quite similar, ranging from 0.017 for restaurant operators, 0.024 for restaurant franchisors and 0.029 for manufacturing firms.

At first glance, that manufacturing firms are more financially liquid may seem like a positive and, from a purely liquidity standpoint they are. However, excessive holdings of cash carry a burden on firms as they represent assets that must be financed but that do not earn a rate of return in excess of the required return on the firm's capital. Therefore, while the extremely high level of liquidity for these firms is a positive from a financial risk standpoint it is a negative from a financial valuation standpoint.

<b>Table 3, Panel A: Cash Conversion Cycle and Net Liquid Balance, 1994-2003</b>			
	Restaurant Owner Operators	Restaurant Franchisors	Manufacturing Firms
Cash Conversion Cycle	-2.764 days	29.892 days	120.339 days
Net Liquid Balance	\$7.593 million	\$5.284 million	\$54.900 million
Net Liquid Balance / Total Assets	0.0170	0.0242	0.0290

<b>Table 3, Panel B: Components of the Cash Conversion Cycle, 1994-2003</b>			
	Restaurant Owner Operators	Restaurant Franchisors	Manufacturing Firms
Days in Inventory	7.84	8.79	91.74
Days in Receivables	5.50	62.31	85.86
Days in Payables	14.59	32.98	180.49

The last issue considered here is related directly to the issue of financing working capital in that the negative cash conversion cycle of restaurant owner operators has another implication beyond the fact that it makes them highly liquid from an operating perspective. A lower cash conversion cycle also means that the firm incurs lower financing costs on their operating working capital. In Table 4

an estimate of the average cost to finance operating working capital was calculated for firms in each of the three groups. An estimate of 10% as the firm's WACC was used and this was applied to the balance financed in each of the firm's components of the CCC. Manufacturing firms, because they need to finance their sizable operating capital for 125.81 days on average, must incur annually a \$6.928 million dollar financing cost. Restaurant franchisors have a lower CCC and hold a smaller raw dollar amount of operating capital than the manufacturing firms but still incur a positive cost to finance their operating working of \$59,000 per year. However, since they have a negative CCC, restaurant owner operators have the additional benefit of gaining free financing for their operating working capital. In fact they spin off a small profit of \$8,400 per year on average. While not significant, it does mean that these firm's have an advantage over the others in our sample as they need not "make-up" the financing costs incurred by holding dead weight loss working capital.

<b>Table 4</b>			
<b>Cost of Carrying Operating Capital</b>			
<b>1994-2003</b>			
	Restaurant Owner Operators	Restaurant Franchisors	Manufacturing Firms
	(\$ Millions)		
Cost of Carrying Operating Capital	\$-0.0096	\$0.0754	\$7.1035

## **V. Conclusion**

Many financial analysts, creditors and managers use static measures of liquidity such as the current and quick ratios as a gauge of the firm's ability to meet cash obligations as they come due. However, static measures, such as the current and quick ratios, are only generally useful to estimate the firm's ability to cover short-term obligations given that the firm liquidates the current assets required for operations and that this liquidation occurs at or near book value. These measures are not as useful to assess the ability of the firm to cover current obligations while operating and therefore should not be used as an indicator of firm liquidity as an on-going concern. This issue was shown to be specifically problematic when evaluating restaurant companies as well as manufacturing companies. It was found that, within an integrative liquidity framework, the cash conversion cycle a measure of the firms operating liquidity and the net liquid balance, a measure of the firm's financial liquidity, provide additional information about the firm's ability to cover obligations while continuing to operate beyond that provided by the static measures.

Specifically, restaurant owner operators, when evaluated under this integrative framework, were shown to be as liquid as both restaurant franchisors and manufacturers based on their financial liquidity and more liquid than both when assessing operating liquidity. These results provide a drastically different view of owner operator restaurant liquidity than those produced from static measures like the current and quick ratios. This is an important finding for managers and investors as it may have a substantial impact on their financing costs and required returns from equity investors. Thus, it is important for financial analysts, creditors and managers to examine both dynamic liquidity measures as well as static measures in their evaluation of the risk associated with covering their obligations when evaluating the financial liquidity and short-term default risk of restaurant owner operators. Furthermore, operating liquidity measures and financial liquidity measures provide

different pictures and the use of both is important in determining the overall liquidity of the firm. Therefore, when evaluating short-term liquidity we must pay careful attention to each component of the integrative framework to establish what changes, if any, have occurred in the liquidity position over time and what the implications are for the firm's financial and operating liquidity.

## References

- Baumol, W.J. 1952. The transactions demand for cash: An inventory theoretic approach. *The Quarterly Journal of Economics* 66 (4):545-556.
- Emery, G.W. 1984. Measuring short-term liquidity. *Journal of Cash Management* July/August:7-14.
- Kamath, R. 1989. How useful are common liquidity measures? *Journal of Cash Management* January/February:24-28.
- Richards, V.D. and E.J. Laughlin. 1980. A cash conversion cycle approach to liquidity analysis. *Financial Management* Spring:32-38.
- Shulman, J.M. and I.G. Dambolena. 1986. Analyzing corporate solvency. *Journal of Cash Management* September/October:35-38.
- Shulman, J.M., and R.A.K. Cox. 1985. An integrative approach to working capital management. *Journal of Cash Management* November/December:64-67.

