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LIQUIDITY MANAGEMENT TOP TEN: FINE TUNING CASH PORTFOLIOS

EXECUTIVE SUMMARY:

Few financial executives have a firm grasp of what liquidity means in a portfolio of individual cash assets.

The two main criteria in measuring liquidity are: 1. how long it takes to convert an asset to cash, and 2. how much of a price “haircut” must be taken on the sale.

The Top 10 Liquidity Factors may provide useful tools during the security selection process.

Additionally, investors may benefit from the Six Steps to Better Liquidity in portfolio construction decisions.

While no one can pinpoint when the next market liquidity event may occur, portfolio liquidity management in times of smooth sailing is certainly within the control of the cash investor.

Financial executives often consider liquidity as a major investment objective for their excess cash accounts. Few, however, have a firm grasp of what liquidity means beyond daily access to a money market fund. This is especially so in a portfolio of individual cash assets. As the Federal Reserve aggressively mops up excess liquidity from the financial system, now could be a good time to fine tune liquidity in your portfolio.

WHAT IS LIQUIDITY AND HOW TO MEASURE LIQUIDITY?

Liquidity can be different things in different situations. This article addresses a portfolio of supposedly liquid investments that a typical treasury account may keep for planned and unanticipated cash needs.

With marketable cash investments, liquidity generally means how easily and quickly one may exchange a security for cash with little price concession from its going rate. Using this definition, cash currency and demand deposits at financial institutions are certainly liquid. How, then, does one discern other types of cash assets?

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Treasury bills and corporate commercial paper with Prime-1 credit ratings are highly liquid. A bank certificate of deposit usually does not qualify as a liquid asset.

Some new investments specifically catered to cash investors carry higher liquidity risk. Examples include collateralized debt obligations (CDOs), funding agreements, and extendible commercial notes.

A recent survey by Moody's found that money market funds are getting riskier partly due to increased liquidity risk.

of Treasury bills and corporate commercial paper with Prime-1 credit ratings often can receive cash payments on the date of the transaction, and at a price very close to the dealer-quoted price. By contrast, a bank certificate of deposit usually does not qualify as a liquid asset. An investor either waits until the CD's maturity date to withdraw funds, or pays a substantial penalty for early withdrawal. The liquidity of other cash instruments falls somewhere in between.

WHY BOTHER WITH LIQUIDITY?

We wanted to address the topic of liquidity management as we are witnessing the proliferation of new investments specifically catered to cash and short-duration investors. A common thread in the design of many of these cash vehicles is higher liquidity risk in exchange for better yield opportunities. A few examples of these investments are collateralized debt obligations (CDOs), funding agreements, and extendible commercial notes.

Investors who intend to hold securities to maturity often make the mistake of downplaying the importance of liquidity. To them, the ability to turn short-term financial assets into cash quickly at the lowest cost possible does not seem relevant if the expectation is to collect bond proceeds at maturity. This assumption may not be consistent with the management principles of a treasury cash account.

Many treasurers would agree that forecasting cash flows is part science and part art. An unexpected cash need may force the early redemption of an existing holding. Concerns with credit or interest rate risk may also require a sale to avoid future losses. Additionally, liquidity has economic value. In other words, a less liquid security should carry a more attractive price than an otherwise identical, but more liquid security.

For example, a two-year floating rate note with three-month interest rate resets may provide 0.05% to 0.10% more annualized yield than a three-month commercial paper from the same issuer. The former may be less liquid, but is otherwise almost identical to the commercial paper in risk exposure.

In fact, a recent survey by Moody's Investor Services found that money market funds, an investment vehicle most consider as very safe and very liquid, are getting riskier. Partly to blame is the use of non-traditional investments with poorer liquidity and the increase in the percentage allocation to securities classified as illiquid.

WHAT FACTORS INFLUENCE LIQUIDITY?

Portfolio liquidity is the result of many factors, including general financial market conditions and specific security features. Listed below are some of the more prominent influencing factors that may be relevant to treasury cash accounts.

1. Size and Breadth of Market Sectors: U.S. Treasury securities are among the most liquid bonds in the world. Aside from strong credit backing from Uncle Sam, they are liquid because they are widely held. Generally speaking, liquidity is better in large market sectors with higher debt outstanding and higher daily trading volume. These sectors include federal agencies and corporate securities. The municipal, asset-backed

and commercial mortgage debt markets may be less liquid by comparison.

Top 10 Liquidity Factors:

1. Size and breath of market sectors
2. Market's risk appetite
3. Credit ratings
4. Round lots
5. Issuance and outstanding size
6. Inclusion in a market index
7. bond structure
8. Country of origin
9. Coupon rate preference
10. On-the-run benchmarks

2. Market's Risk Appetite: General market sentiment towards liquidity risk premiums can be a significant factor. When interest rates are low, credit is easy, and the world is at peace, investors tend to demand a lower premium for liquidity. When central banks embark on tighter monetary policies or when geopolitical risk is on the rise, credit uncertainty increases and investors typically want to stay with more liquid securities. As a result, they'll demand a higher yield for owning a less liquid security.

3. Credit Ratings: Investors often associate credit risk with liquidity. Securities with credit ratings of triple-A, double-A, or single-A are generally very liquid, as a large number of investors like to purchase them. Bonds rated Triple-B or below-investment-grade are often considerably less liquid, as there are fewer interested buyers. Similarly, a security that is a downgrade candidate will usually be less liquid than one of the same rating that is on the verge of an upgrade.

4. Round Lots: Bond traders often speak of and prefer to trade in "round lots". Although no industry standard exists, these are the preferred minimum "round" trading units that range from \$1 million to \$5 million. Bonds can be bought and sold in any increments of \$25,000, but such "odd lot" transactions are often more difficult to complete.

5. Issuance and Outstanding Size: The size of issuance is a relevant factor since the larger the size, the more likely investors trade the securities. For commercial paper issuance, it is the total amount of all commercial paper outstanding. In recent years, issuers, including Fannie Mae and Freddie Mac, issued deals in the billions of dollars, which greatly improved liquidity of these deals. By contrast, the same issuers' medium-term note programs, or bonds issued on an as-needed basis from a shelf registration, are much smaller and usually less liquid.

6. Inclusion in a Market Index: Just as stocks in major equity indices tend to have heavier trading volumes, securities in a bond index tend to have better liquidity. For many total-return oriented managers, investing in securities without an index introduces certain "out-of-index" return variance that is sometimes less desirable or even prohibited by their investment guidelines. Index providers, such as Lehman Brothers and Merrill Lynch, regularly revise their index criteria, which can influence the liquidity of bonds affected. For example, Lehman Brothers increased the minimum size requirement for inclusion in its indices from \$100 million to \$150 million in 1999, resulting in less liquidity for some bonds.

7. Bond Structure: In bond parlance, bonds with fixed coupon rates and fixed maturity dates are "plain vanilla" bonds. This is the most liquid of all bond structures. Securities with a floating-rate feature tend to be less liquid as their coupon rates float with market rates and are less certain. Callable bonds may also be less liquid due to their cash flow uncertainty and reinvestment risk. The call feature allows issuers to retire bonds at face value prior to maturity.

8. Country of Origin: No, it's not that obvious. U.S. dollar-denomination does not indicate a country of origin. Country of origin refers to the locale where the securities were initially sold. If a U.K. subsidiary of a U.S.-based firm chooses to issue dollar debt in Luxemburg, the country of origin is Luxemburg. A trade may take place in New

York, but international regulations for cross-border transactions may delay settlement by several days to even weeks. Multinational corporations such as AIG and General Electric issue debt in many countries. Investors should be cognizant of the liquidity constraints potentially associated with country of origin.

9. Coupon Rate Preference: The coupon rate may influence a bond's liquidity. Bonds are "fixed income" securities, as investors expect to receive fixed future payments. In general, bonds with coupon rates close to the prevailing market rates, or "current coupon" bonds, tend to be more liquid than those with rates that are either higher ("premium") or lower ("discount") than the market rates. A premium bond requires one to pay more than the face amount at purchase, and gradually receive the extra payment back at coupon payment dates. Conversely, investors relying on steady income payments may not desire discount securities that pay coupons that are less than the market rate.

10. On-the-Run Benchmarks: This is a technical market factor that influences bond liquidity. Treasury bonds of 2, 3, 5, 10 and 30-year maturities are "on-the-run" bonds, while all other Treasury securities are considered "off-the-run". On-the-run bonds are more liquid as they have the highest trading volumes, tend to be easier to price, and act as benchmarks for other bonds. Dealers use on-the-run Treasuries to hedge their interest rate risk. Non-Treasury bonds with comparable maturities to on-the-run Treasury bonds tend to be more liquid. For example, when the Treasury Department reintroduced the 3-year note, liquidity of other bonds maturing in three years immediately improved.

MANAGING LIQUIDITY

So, how can treasury professionals better manage liquidity risk in their portfolios? In addition to paying attention to the 10 liquidity factors above, the following is a sample of measures that may help improve a portfolio's liquidity profile.

Decide on a Maturity Structure: Bond maturities often represent the most predictable and least costly sources of liquidity. When possible, treasury managers should consider buying bonds with maturity dates that correspond to the dates of major cash disbursements. Money market funds, while providing the convenience of daily liquidity, often have a yield disadvantage relative to other investments.

Comparison Shop: A rule of thumb to owning marketable securities is to ensure that multiple dealers are "making a market" in those securities (buying and selling those securities regularly). Liquid securities generally have support from at least three dealers. Investors may want to be skeptical of proprietary brokerage or bank products that do not have the support of other dealers.

Do Your Homework and Delegate: The proliferation of new cash products with special features requires more due diligence work. Many new products have derivative, leverage, or extension features that affect their liquidity. Investors who desire higher yield potential may want to delegate the task of managing these non-traditional investments to an outside manager with experience in these investments.

Get Paid for Taking on Liquidity Risk: Liquidity has its price. When treasury

Six Steps to Better Liquidity:

1. Decide on a maturity structure
2. Comparison shop
3. Do your homework and delegate
4. Get paid for taking on liquidity risk
5. Establish a liquidity budget
6. Beware of over-diversification

managers don't need immediate liquidity, they may want to invest in something that compensates them for liquidity risk with a higher yield. Assessing liquidity premiums may be more art than science, and may require experience and understanding of how particular market sectors operate.

Establish a Liquidity Budget: Investors may also improve liquidity management by designating a portion of their portfolio to securities that may be less liquid, "an illiquid basket." For example, money market fund managers routinely place up to 10% of their holdings in illiquid securities. The liquidity of the other 90% of the portfolio often sufficiently protects against unexpected cash needs.

Beware of over-diversification: Finally, a word of caution. It is prudent to reduce risk by diversifying holdings, but treasury professionals may want to try to avoid owning old-lot positions that may reduce liquidity. For example, requiring a 2% issuer concentration limit in a \$10 million portfolio will limit each holding to \$200,000, which is less than the trading size preferred by many investors.

CONCLUSION

Traditionally, the role of liquidity in buy-and-hold cash portfolios is not widely recognized. One reason is that the role is difficult to investigate empirically. Liquidity supply and demand are not always observable. In a liquidity-based market crisis, price behavior often depends on who holds what and who must liquidate. While no one can pinpoint when the next market liquidity event may occur, portfolio liquidity management in times of smooth sailing is certainly within the control of the cash investor.

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APPENDIX: COMMON LIQUIDITY FACTORS MATRIX

		More Liquid	Less Liquid
Market Factors	Interest Rate - Falling	x	
	Interest Rate - Rising		x
	Credit Conditions - Easy	x	
	Credit Conditions - Tight		x
	Geopolitical Risk - Low	x	
	Geopolitical Risk - High		x
Security Types	Treasury	x	
	Agency	x	
	Corporate	x	
	Asset-backed		x
	Mortgage-backed		x
	Municipal		x
Credit Ratings	A-rated & Higher	x	
	BBB-rated & Lower		x
Trading Sizes	Bonds > \$1 million	x	
	Bonds < \$1 million		x
	Commercial Paper > \$5 million	x	
	Commercial Paper < \$5 million		x
Market Indices	Included in Market Indices	x	
	Not-included in Major Indices		x
Bond Structure	Fixed Rate Coupon	x	
	Floating Rate Coupon		x
	Non-callable	x	
	Callable		x
Countries of Origin	US and/or Global Markets	x	
	Non-US Markets		x
Coupon Preferences	Current Coupon	x	
	Premium Coupon		x
	Discount Coupon		x
Treasury Benchmarks	On-the-Run	x	
	Off-the-Run		x