UBS

Liquidity Perspectives—4Q16

Increasing liquidity: A framework for managing risk in volatile times

- We believe heightened geopolitical risk, anemic economic growth and unprecedented monetary policy action have contributed to a more volatile market environment. Corporations have placed increased emphasis on their ability to maintain a healthy liquidity buffer to protect themselves against the unknown and to capitalize on opportunities.
- Maintaining liquidity for extended cycles during an ultra-low rate environment typically raises the challenge for preserving and growing capital on an inflation-adjusted basis. As a result, we believe developing a disciplined approach to cash-segmentation and a diversified investment strategy are paramount.
- Investing cash in a diverse range of vehicles may require venturing into new territory further out the yield curve and down the credit spectrum. But this requires an understanding of key risk and volatility metrics such as liquidity, credit quality and duration.
- We believe developing a framework for how each cash-management option fits within these risk and volatility parameters is crucial to achieving a balanced and successful cash management strategy.

Preserving and growing liquidity

The global economy has experienced anemic growth in the aftermath of the financial crisis, which has been partially sustained by an unprecedented level of monetary policy action. The economy's dependence on central bank support has become so pronounced that any hint of rate normalization results in bouts of market volatility, underscoring the vulnerability of the economic cycle. From a corporate treasurer's perspective, this environment warrants caution and places a premium on maintaining a healthy level of liquidity, not only as a defensive buffer to protect against the unknown, but also to capitalize on opportunities.

Preserving capital on a real and unadjusted basis is extremely challenging, especially given the "lower-for-longer" rate environment and the need to maintain a strategic liquidity buffer. Nevertheless, we believe developing a disciplined approach to segmenting cash into different layers and deploying it across various risk-and-return parameters is key and may provide some of the following benefits:

- **Cost efficiency:** Having clearly visible and accessible stores of cash reduces the need to tap into credit lines and can help ensure business continuity at a significantly lower cost.
- **Diversification:** Identifying levels of cash with different maturity profiles allows treasurers to use a variety of investment vehicles and counterparties, effectively reducing concentration risk.
- **Enhanced risk-adjusted returns:** Categories of cash that are deemed "reserve" or "strategic" allow treasurers to utilize investment options that could potentially provide better inflation-adjusted returns as well as the opportunity for capital growth.

Understanding key risk and volatility metrics

A diversified cash management strategy is critical to maintaining liquidity while preserving and growing capital on an inflation-adjusted basis. Investing cash in a diverse range of vehicles may require venturing into new territory further out the yield curve and down the credit spectrum. But this requires an understanding of key risk and volatility metrics such as liquidity, credit quality and duration.

Liquidity risk is the risk that a counterparty may be unable to meet a redemption call due to its inability to immediately convert a security or hard asset into cash. The liquidity related to each investment vehicle is usually agreed upon in advance. For example, bank deposits and 2a-7 money market funds typically

provide daily liquidity, while short-duration bond funds and separate accounts may settle within a few days. In any case, treasurers should carefully review these pre-set agreements for provisions such as gates/fees (for certain fund investments) and suspension of convertibility (for bank deposits). When investing in individual securities, treasurers should also consider the financial health of the custodian and have a clear understanding about their right to access securities if a counterparty fails. For example, Dodd-Frank's "standstill" provision on qualified financial contracts such as repurchase agreements may freeze access to collateral for a period of 48 hours.

Credit risk is the risk that a counterparty may default in part or in whole on its principal obligation. Reference to credit rating agencies is useful when looking at diversified investment vehicles such as money market funds or short-duration bond funds. However, if corporate treasurers invest in individual securities such as commercial paper, it is critical to conduct rigorous and continuous internal research about the business fundamentals of the underlying issuer. For example, returns on A2/P2 commercial paper may seem very attractive on an absolute return basis, but may not be as attractive on a risk-adjusted basis. We believe that developing a framework for quantifying volatility on these individual investments is critical.

Duration risk is the risk that measures the sensitivity of a bond's price to changes in interest rates. The vast majority of cash management vehicles, including bank deposits, are typically linked to fixed income securities sensitive to duration risk. Generally, the further out the yield curve, the higher the duration risk will be. Considering the low-rate environment we have been experiencing over the past decade or so, duration risk becomes an especially important concept should central bank policy become more volatile, or move more quickly.

Understanding risk/return tradeoff for various cash vehicles

The following provides an assessment of the most common liquidity management vehicles along the risk parameters discussed above (see Table 1 for summary).

- **Money Market Funds (2a-7):**
  2a-7 money market funds are the most diversified and most liquid cash investment available to treasurers. Given their exposure to underlying US Government securities and related repurchase agreements, government funds score the highest in terms of credit quality. Furthermore, they are not subject to potential gates and fees provisions that apply to prime funds. Prime funds continue to be a high-credit quality vehicle for cash, providing daily liquidity under normal circumstances while potentially enhancing returns. Some of the key questions treasurers should consider when regarding prime funds include:
  1. Is the liquidity risk associated with potential gates and fees well compensated?
  2. Is it worthwhile to consider other options such as Short Duration Funds or Separate Accounts to mitigate the liquidity risk associated with prime funds?

- **Bank Deposits**
  Similar to money market funds, overnight bank deposits usually provide immediate access to liquidity. However, placing cash with a single institution brings no diversification benefit and entails more risk especially when considering that banks, too, could gate deposits through suspension of convertibility. Additionally, new regulations aimed at eliminating banks' reliance on implicit government support in times of crisis must be considered. Treasurers should pay close attention to a bank's Core Tier 1 Capital Ratios, Leverage Ratios and Total

Table 1: Key risk measures associated with common liquidity management vehicles

	Liquidity		Duration		Credit	
	Gates	Accessibility	WAM	WAL	Credit Quality	Issuers
Government Money Market Funds (2a–7)	No	T + 0	2 months	6 Months	AAAmmm	Multiple
Prime Money Market Funds (2a–7)	Yes	T + 0	2 months	6 Months	AAAmmm	Multiple
Bank Deposits	Yes	T + 0	Varies	Varies	A	Single
Commercial Paper	No	T + 0	1–270 Days	1–270 Days	A1/P1–A1/P2	Single
Separately Managed Accounts	No	T + 3 or higher	3–36 Months	3–36 Months	AAA to BBB	Multiple
Short Duration Funds	Yes	T + 3 or higher	3–36 Months	3–36 Months	AAA to BBB	Multiple

Loss-Absorbing Capital to understand a bank's ability to sustain itself in times of stress.

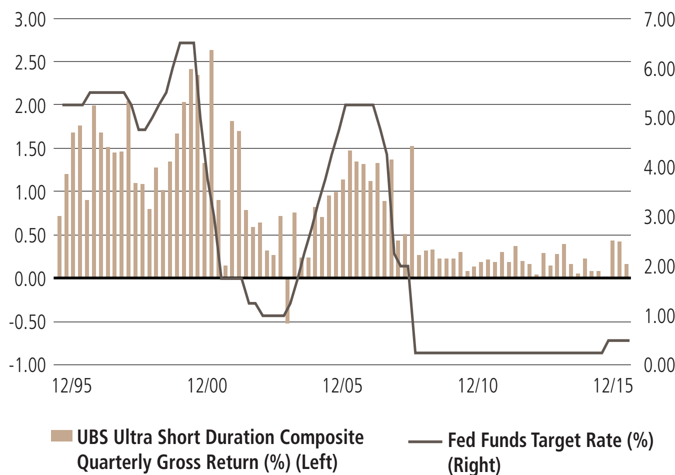
- **Investment in individual securities**
Given the recent shift in money market assets from bank paper to government instruments, the Libor curve has experienced a significant upward shift, making investing in instruments such as commercial paper and floating rate notes very attractive on an absolute return basis. When investing in single issuers, it is important to consider incorporating it as part of a broader and well-diversified investment strategy so that the added risk aligns with the risk profile of the overall cash portfolio.

- **Short-Duration Bond Funds (SDBF) and Separately Managed Accounts (SMA)**
SBDFs and SMAs allow access to a broader universe of securities but may cause higher volatility given increased credit and interest rate risks. We think such volatility can be tolerable for the portion of cash assets that is stable, provided that investors do stick with the strategy's underlying duration. To illustrate this point, we show historical returns on UBS's Ultra-Short and Short-Duration composites (Figures 1 and 2). When duration increases, so does the volatility of total returns. However, when considering an investment horizon consistent with the duration of these strategies, rare periods of negative returns are typically offset by multiple periods of strong positive returns.

Table 2: Key differences between SDBFs and SMAs:

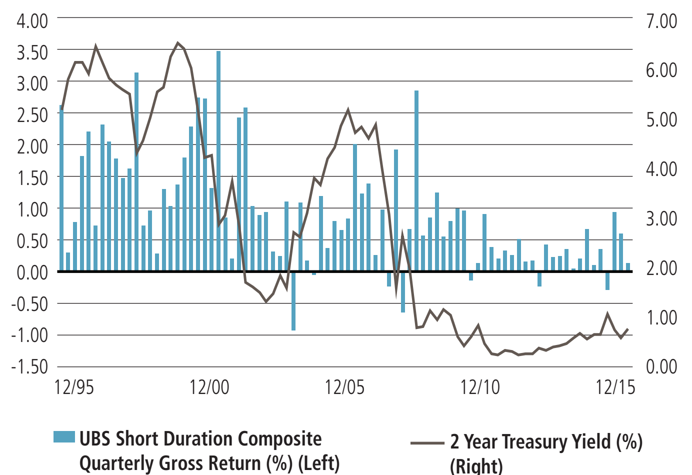
Short-Duration Bond Funds	Separately Managed Accounts
• Provide yield incentive by going further out the curve and down the credit spectrum	• Provide complete ownership of securities and asset flows
• Bond Funds don't necessarily "mitigate regulatory constraints" such as FNAV, gates and fees	• No gates or redemption fees
• Subject to investment policy of the fund	• Ability to customize investments for reserve and strategic cash, as well as the ability to construct a money market-like portfolio for operating cash

Figure 1 – US Ultra Short Bond Composite: quarterly performance
As of September 30, 2016



The returns shown above are based on currently available information and are subject to revision. Past performance is no guarantee of future results. Performance figures are gross of fees. Please see attached disclosure information. Returns are in USD.

Figure 2 – US Short Duration Composite: quarterly performance
As of September 30, 2016



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The views and opinions expressed were current as of November 2016. We encourage you to consult your Financial Advisor regarding your personal investment program.

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16-0988 11/16
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