Goldman Sachs

Mosaic

Introduction to Money Market Funds

Goldman Sachs Asset Management Liquidity Solutions

May 2020

Introduction to Money Markets

What are the "money markets"?

- Money markets are a component of the financial markets that consist of assets involved in short-term borrowing and lending with maturities of one year or shorter.
- Money market securities are essentially IOUs issued by governments, financial institutions and large corporations. These instruments are typically very liquid and considered very safe. Due to their conservative nature, money market securities offer lower returns than many other securities.
- One of the main differences between the money markets and other markets is that most money market securities trade in high denominations. This limits direct access for the individual investor.

How can you gain access to these markets?

- A money market fund is the easiest way to gain access to the money markets.
- A money market fund is a mutual fund that invests in short term debt securities. These funds allow investors to participate in a more liquid, diverse and high-quality portfolio than if they were to invest individually.

Source: GSAM

Definition of a Money Market Fund

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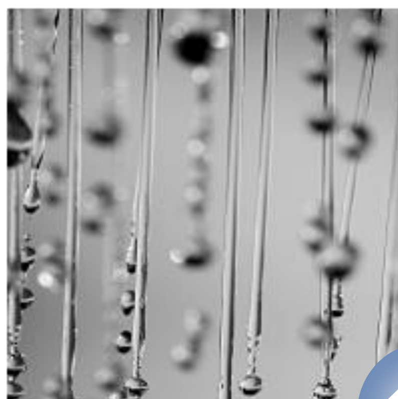
- Money market funds are regulated mutual funds that invest in high-quality, short-term debt instruments.
- They enable the investor to participate in a more diverse portfolio than they otherwise could individually.
- The highest rated money market funds are AAA-rated and maintain a stable Net Asset Value (NAV).
- Within their investment parameters, they aim to preserve capital, maintain daily liquidity and seek to maximise current income.

Preservation of Capital (Stability)

1

Liquidity



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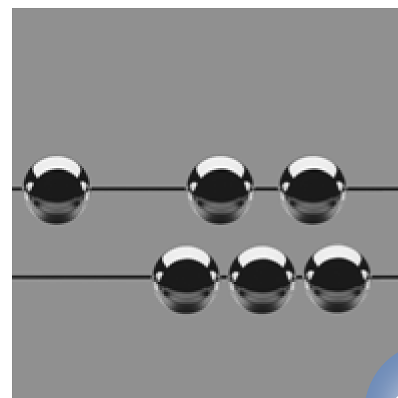
Yield



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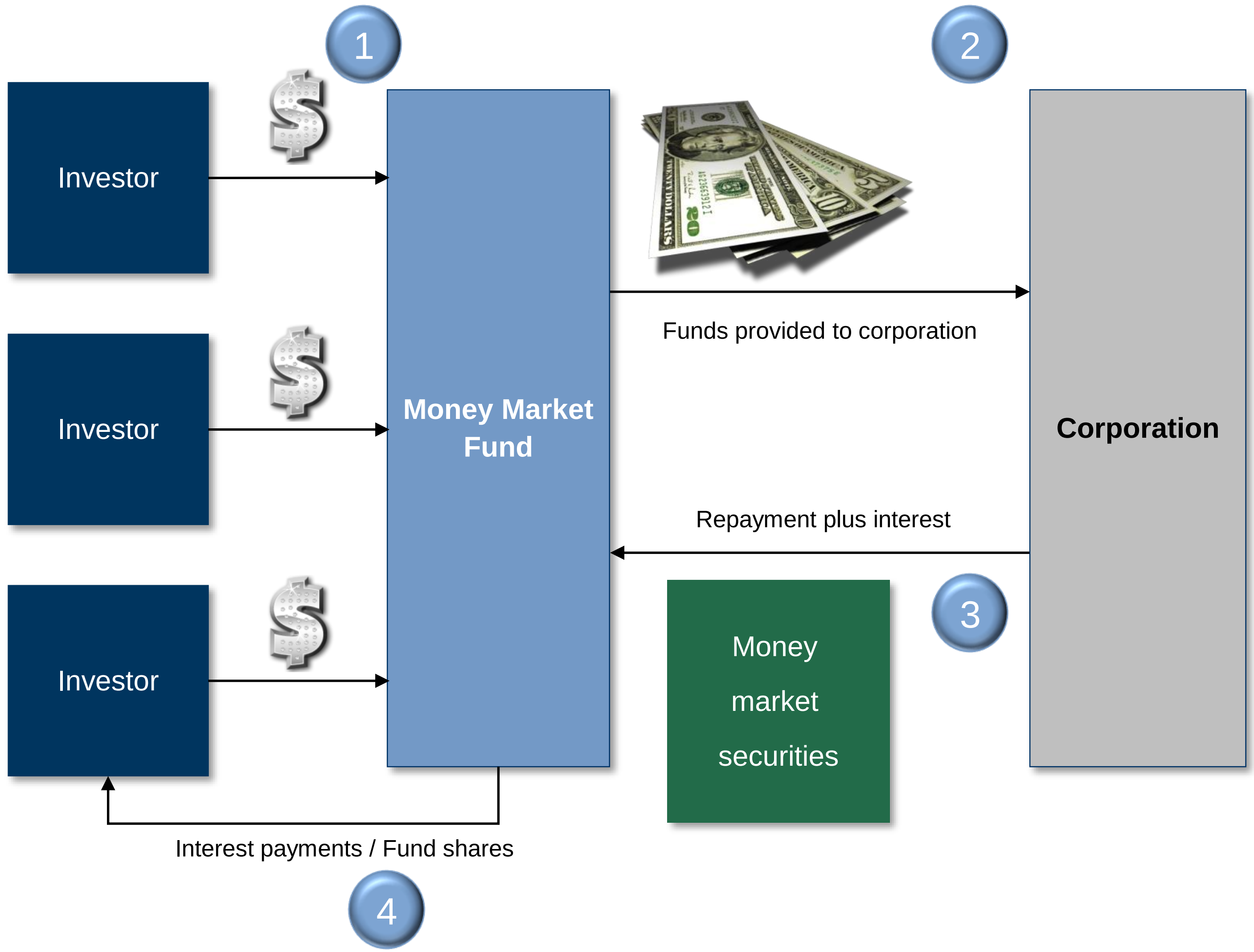
Understanding the Money Market Funding Engine

1. Investors deposit cash with the MMF's custodian.
2. The MMF selects and invests in money market securities according to the Investment Policy of the Fund.
3. Purchased securities are held at the MMF's custodian on behalf of the Investors.
4. Returns on the portfolio may either be paid to investors periodically or reinvested in the fund.



Source: WSJ & GSAM 2020. For illustrative purposes only

What Do Money Market Funds Invest In?

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Taxable money market funds invest in money market instruments that have minimal mark to market volatility due to their short maturities and high credit quality and are denominated in the same currency as the fund's base currency. Derivatives, MBS, ABS and CDO are not eligible securities

Time Deposits (TD)	A deposit in an interest-paying account that requires the money to remain on account for a specific length of time
Certificates of Deposit (CD)	A debt instrument issued by a bank that will pay interest – periodically or at a maturity – and principal when it reaches maturity
Floating Rate Notes (FRN)	Debt instruments with variable interest rates
Repurchase Agreements (REPO)	An agreement between a seller and a buyer, usually of US government securities, whereby the seller agrees to repurchase the securities at an agreed price and, usually, at a stated time
Government Backed Securities	Debt instruments issued directly by governments, or by government agencies
Commercial Paper (CP)	Short-term obligations with maturities ranging from 2 to 270 days issued by banks, corporations, and other borrowers to investors with temporary idle cash
Asset Backed Commercial Paper (ABCP)	Asset Backed Commercial Paper is similar to traditional commercial paper in that it is issued with maturities of one year or less and is highly rated. The difference between ABCP and CP is that instead of being an unsecured promissory note representing an obligation of the issuing company, ABCP is backed by securities. Therefore, the perceived quality of the ABCP depends on the underlying securities

Source: GSAM. As of June 2020

Comparing Bank Deposits to Money Market Funds

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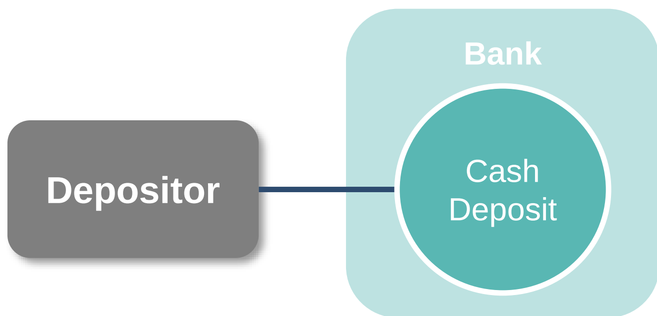
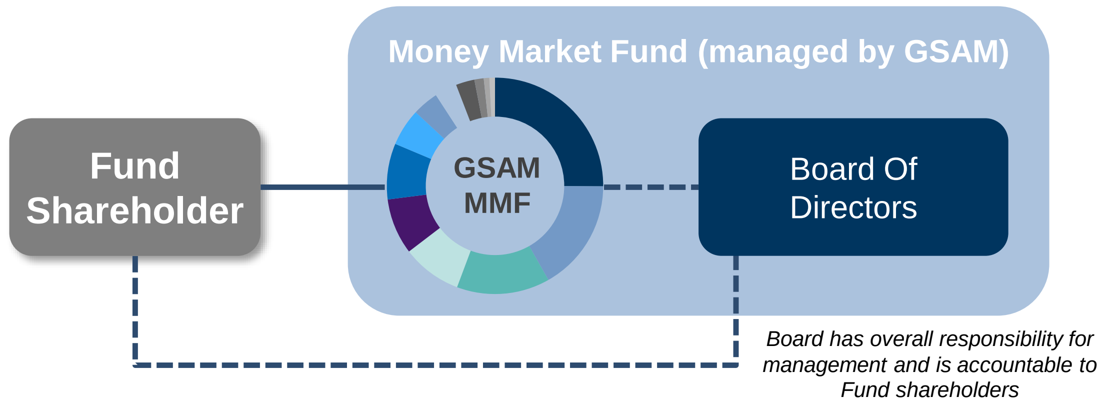
Cash Deposit



Asset Ownership:

- Held on Bank's balance sheet and classified as a general liability
- Unsecured, subject to claims of Bank creditors

Money Market Fund



Asset Ownership:

- Held separately from assets of GSAM, meaning MMF assets are not subject to the claims of creditors of GS or GSAM related events
- Multiple Levels of Oversight: GSAM, Board of Directors, Custodian

When compared to bank deposits, Money Market Funds (MMFs) offer the following benefits:

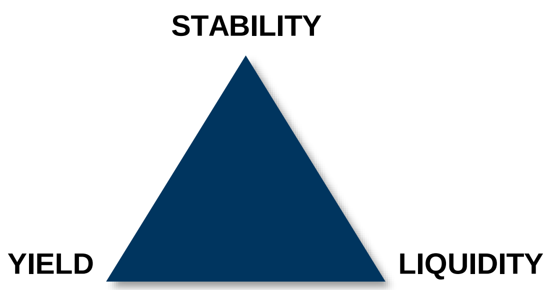
Segregated Assets – MMFs are structured as segregated entities (typically investment companies) that own the underlying assets but which are held separately from the asset manager by an independent custodian. By contrast, bank deposits are unsecured liabilities on a bank's balance sheet.

Diversified Counterparty Risk– MMFs are inherently diversified by virtue of investing in a broad portfolio of underlying assets. As a result, such MMFs have better diversification than a single bank's deposits, which present single counterparty risk.

Liquidity Benefits– MMFs invest in a large proportion of highly liquid securities to offer investors same-day (T+0) or next-day (T+1) liquidity. Unlike some bank deposits, redemptions can be carried out with no minimum transaction size, lock-up period or penalties.

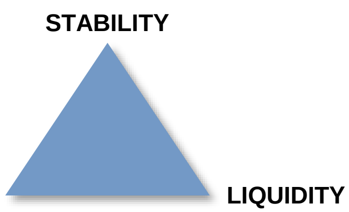
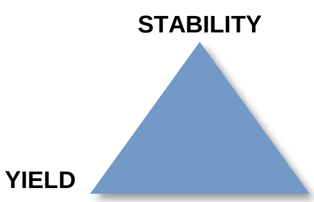
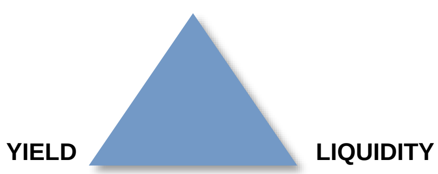
Balance Between Stability, Liquidity and Yield

The risk / return tradeoff in liquidity investing



As investors balance the desire for principal stability, liquidity, and yield, it is important to remember that typically the market only allows for two goals at any one time, at the give-up of the third goal

In today's market environment in particular, where absolute rate levels in the shortest-maturity, highest-quality investments in the Europe and the U.S. are so close to zero, incremental yield involves stability and liquidity risk

	Situation	Tradeoff
 STABILITY / LIQUIDITY	No tolerance for any price fluctuation or principal loss Immediate or unpredictable liquidity needs	Limit yield opportunity
 STABILITY / YIELD	Desire for return of initial investment at end of prescribed period, without liquidity need in the interim	Lock up liquidity expressly or risk price loss if need liquidity (e.g., sell at a loss)
 YIELD / LIQUIDITY	Desire for return with ability to redeem on demand or with flexible timeline	No price stability and possibility of loss relative to initial investment

Identifying Liquidity Characteristics

Cash Flow Patterns and Investment Horizon

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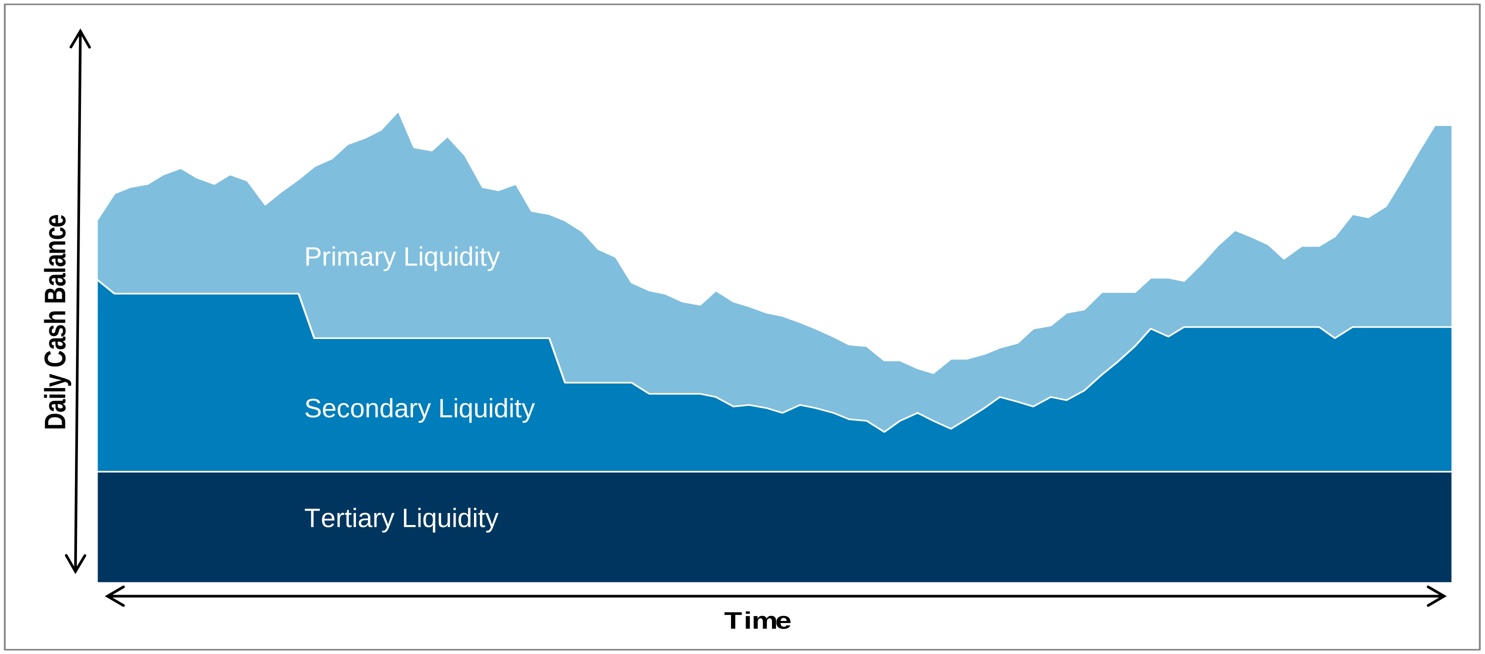
- Investment strategies can be tailored to different categories of liquidity which are differentiated by investment horizon and volatility of cash flows



	Primary liquidity	Secondary liquidity	Tertiary liquidity
Investment horizon	0 to 12 months	12 months or longer	Indefinite
Cash flow volatility	High	Low	Very low
Objective	Preservation of capital and immediate liquidity	Enhanced return and preservation of capital	Greater emphasis on maximising return potential
Strategy	Money Market	Short Duration	Broad Fixed Income

Repurchase Agreements (Repo)

Overview and Triparty Flow

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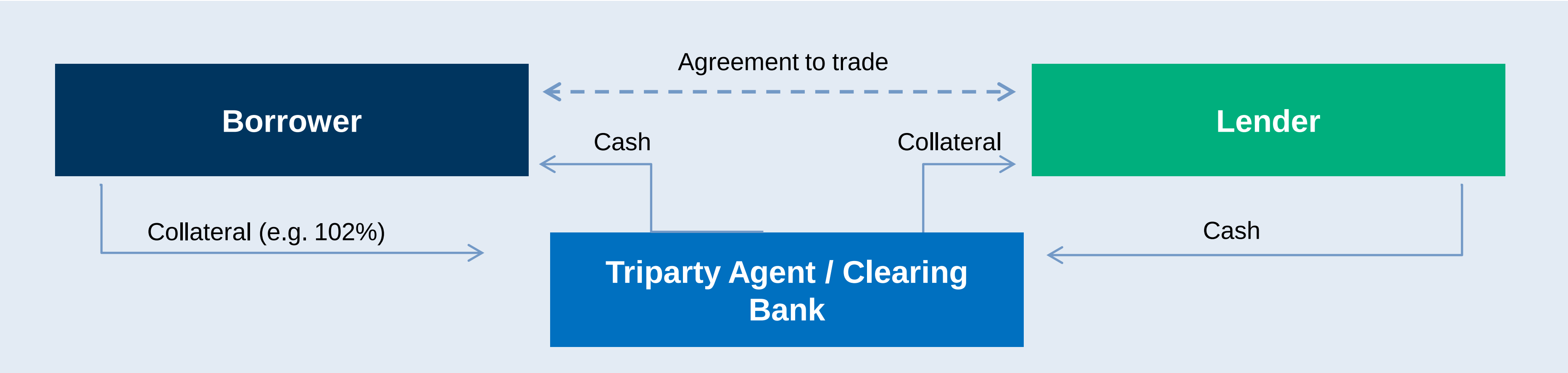
Description	■ A contract between two parties where one party sells a security to another party with the commitment to buy it back at a specified price at a designated future date. ■ Can also be viewed as a secured cash loan. The repo rate is the rate of interest charged on the cash: ■ "Repo" = Lend cash = "Buy" collateral = Interest income. ■ "Reverse Repo" = Borrow cash = "Sell" collateral = Interest expense. **GSAM MMFs only engage in Reverse Repo, so as not to employ leverage.**
Rationale	■ Liquidity management. ■ Reduce counter-party exposure.
Market Overview	■ Approximately $3.7 trillion in Repo outstanding (20% drop since 2008).
Investor Considerations	■ Repo is generally issued with high quality government securities as collateral. ■ Repo is generally over-collateralised i.e. the amount of collateral received is beyond the amount of cash lent.



* Source: Investment Company Institute, 2016.

Asset-Backed Commercial Paper

Overview

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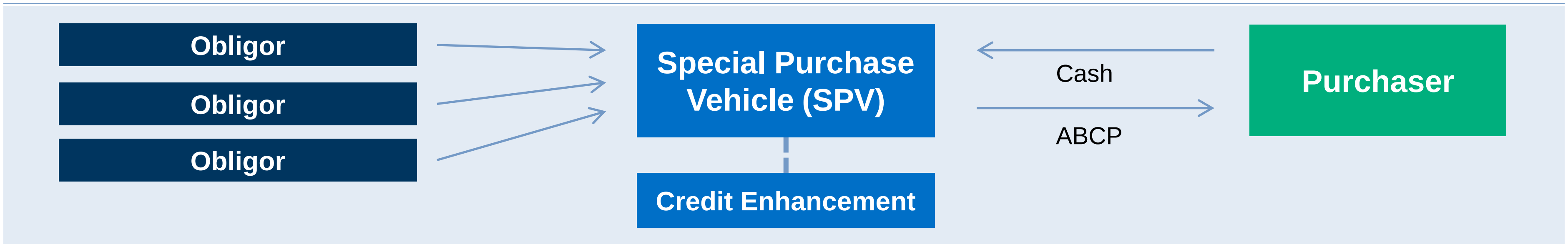
Description	ABCP is issued by a special purpose vehicle (“SPV”) with severe restrictions on activities. SPV issues ABCP to purchase liquid or fast-turning income-producing assets. Cash flows on assets are used to pay maturing ABCP or to reinvest in new assets. ABCP holders are protected by asset cash flows, credit enhancement and backup liquidity.
Rationale	Low cost financing of high-quality assets. Funding diversity. Balance sheet management. Liquidity through asset sales.
Market Overview	Approximately $300 billion in ABCP outstanding.
Investor Considerations	ABCP lends itself to actuarial credit analysis by rating agencies and investors. ABCP generally carries high short-term ratings (A-1/P-1/F-1 and higher). ABCP investors focus on asset quality and program structure, not “traditional” elements (e.g., cash generation and the overall health of an issuer’s business). ABCP has certain legal/credit characteristics that are not possessed by traditional issuers, including insulation from event risk, obligor diversification, and analysable liquid assets. ABCP programs tend to have stable (or continuously increasing) outstandings with flexible maturities and block size availability, because they are not subject to the working capital and cash flow requirements of traditional issuers.



* Source: Investment Company Institute, December 2014.

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