Demystifying Asset-Backed Commercial Paper:

A Fresh Perspective on Opportunities and Risks

Executive Summary
ABCP can still be a good investment choice in large corporate treasury accounts due to the liquidity, flexibility, and yield potential of the asset class.

Most traditional multi-seller conduits persevered through the recent financial crisis. Despite low issuance and investor skepticism, the mechanism of ABCP structures improved due to new regulatory measures.

Potential investors should carefully review the strength and type of the sponsor, external support, program type, and asset collateral quality prior to investing.

The wide range of risks among different programs requires specialized credit knowledge and regular asset collateral monitoring to minimize risk.

Introduction
Created in the mid-1980s, asset-backed commercial paper (ABCP) trailed its term asset-backed securities (ABS) cousin in acceptance by fixed income investors, especially corporate cash managers. The stigma against ABCP started to fade in the new millennium, when event risk of corporate names caused the unsecured commercial paper market to shrink dramatically.

Meanwhile, increasing demand from institutional investors for this asset class resulted in the proliferation of innovative ABCP structures that made it more difficult for buyers to discern risk among various programs. Despite that, the market grew rapidly to reach its peak in July 2007, when ABCP outstanding stood at $1.2tn.

Liquidity concerns following the onset of the subprime mortgage crisis pummeled the ABCP market, complemented by the fact that ABCP and the more exotic, now infamous, structured investment vehicles (SIVs) shared some structural similarities. After the Lehman Brothers bankruptcy in September 2008, outflows from prime money market funds, the predominant buyers of ABCP paper, intensified and directly resulted in the reduction of programs outstanding by ABCP sponsors.

As of August 5, 2015, total ABCP outstanding stood at $224 billion, a reduction of 82% from its 2007 peak. By comparison, overall CP outstanding was reduced by 52% to $1.07 trillion over the same period. Two main factors contributed to the reduction in ABCP outstanding, the deleveraging of banks' off-balance sheet activities and regulatory pressure.

May 26, 2005
Revised: August 14, 2015

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For this update to our original primer, we will provide a refresher course on the instrument and a brief history since the crisis, highlight regulatory forces that shape the industry today, discuss its common advantages and risks, and provide a practical investment guide. We stand by our previous assertion that ABCP is a legitimate investment vehicle for corporate treasury accounts thanks to its liquidity, flexibility, and yield advantages. In fact, the market's self-selection process and recent regulations resulted in generally stronger credit profiles of the programs that remain. Meanwhile, we recognize that ABCP investing requires dedicated credit expertise and regular asset collateral monitoring.

ABCP Primer

ABCP is a type of short-term money market instrument issued at a discount and maturing at face value. Unlike corporate commercial paper, which is a borrower's unsecured promissory note to investors, a pool of financial assets provides the collateral to secure ABCP claims.

The development of ABCP paralleled that of the ABS market. In the early 1980s, several US banks started to offer ABCP as another short-term funding channel for their corporate clients. Acting as program administrators, they earned a modest fee by helping their clients borrow from investors directly using trade receivables as collateral and thereby reduced their own balance sheet leverage. The arrangement also allowed corporate borrowers to treat ABCP as off-balance sheet financing. This strong bond between an ABCP program and its sponsor bank has been largely carried forward to this day.

An ABCP issuer is usually a "bankruptcy remote special purpose entity," a structure intended to protect its investors from the bankruptcy risk of the bank sponsor. Credit support for a particular issue comes from the estimated value by which the pool of financial receivables and short-term loans exceeds the face amount of the CP obligation. Specific asset collateral information is unavailable to investors, but program administrators prepare periodic aggregate asset pool reports. Most programs also have credit and liquidity enhancement measures such as standby purchase agreements to address asset quality and liquidity concerns.

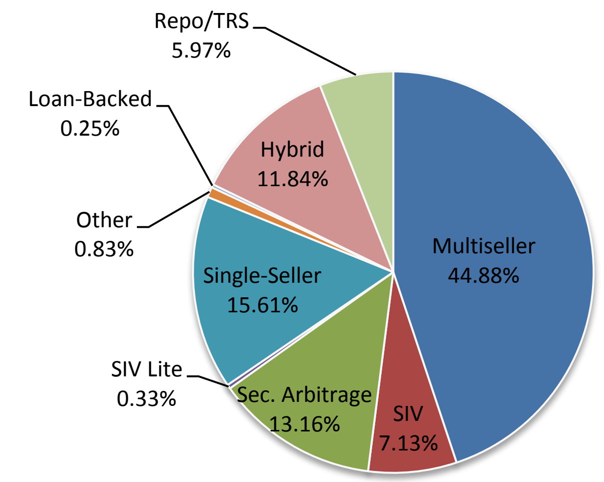
To ABCP investors, the standard feature of at least 100% standby liquidity from a strong bank is especially important. This is to protect investors from the risk of the program failing to issue new paper to roll over from upcoming maturities.

A Brief History of Recent Events

More Exotic Program Features: In the period preceding the subprime mortgage crisis, the growth of the ABCP market encouraged the roll-out of more complex program structures. In an attempt to enhance profitability, some structures no longer purchased full liquidity or credit support. Some conduits added illiquid assets of questionable credit quality to their collateral pools, for which data also became less accessible. The inability for investors to gain insight into the collateral pools became a direct cause for investors to step away from all conduits when a small number of them were revealed to have subprime exposures.

As an example, essentially all conduits were traditional multi-seller programs and were fully supported by sponsor banks at their genesis in the 1980s. By June 30th, 2007, this more conservative group of groups comprised only 45% of total ABCP outstanding, while only 21% of all programs were fully supported[1].

Figure 2: *Moody's Rated ABCP Outstanding by Program Type (June 2007)*



Source: Moody's ABCP Program Index, Moody's Investors Service

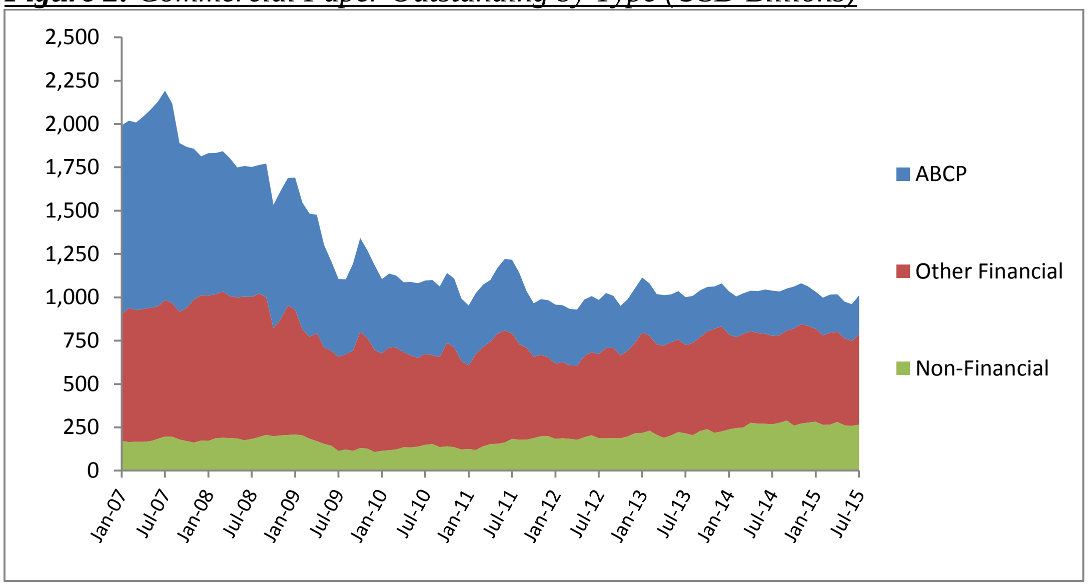
The SIV Debacle: In hindsight, the ABCP market represented a perfect candidate, for shadow banking activities, to which it ultimately fell victim. Using the conduits to finance illiquid, hard to value, and often long-maturity financial assets with little transparency and oversight, sponsors reaped financial gains in a process of maturity and credit transformation. Most notable were structured investment vehicles (SIVs) whose sole purpose was to profit from the yield spread between long-term, higher yielding assets and short-term, lower cost borrowings. Loosely connected with banks, SIVs relied heavily on ABCP as funding vehicles. In late 2007, several SIVs quickly got caught up in the subprime crisis and eventually became insolvent. Their demise led to a rapid fall in popularity of ABCP in general.

Government Support: ABCP played an important role during and after the financial crisis as the government sought to stabilize the financial system and promote recovery. The Federal Reserve provided liquidity to the money markets by purchasing qualified ABCP from money market funds between September 2008 and February 2010. Between April 2009 and December 2013, the Treasury department operated Straight-A Funding, a government-backed ABCP program, to support the funding of government student loans originated by private firms.

Several European government agencies also turned to the ABCP market to fund the run-off assets of the failed banks they took over during the crisis.

Steady Decline: Despite government involvement in this space, the ABCP market experienced a steady outflow of assets since its peak. *Figure 2* shows a breakdown of the CP market. Total ABCP outstanding went from $1.2 trillion in July 2007 to $222 billion in July 2015. Its decline was the most severe among the three categories depicted. This trend was generally the result of three factors: investors' on-going skepticism, reduced off-balance sheet funding needs by banks, and more stringent regulations.

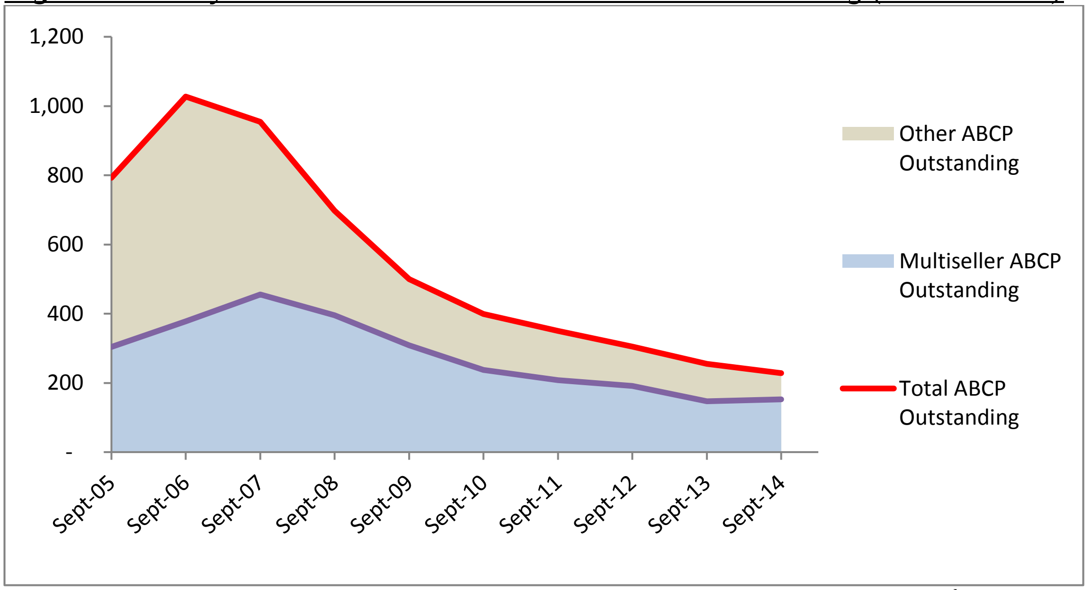
Figure 2: *Commercial Paper Outstanding by Type (USD Billions)*



Source: Board of Governors of the Federal Reserve System (US), FRED Economic Data, St. Louis Fed.

Resilient Multi-seller Programs: It is important to note that not all ABCP structures were affected the same. Traditional multi-seller programs were able to continue issuing ABCP during the turmoil, albeit on an overnight basis for some time. This demonstrates an important distinction in investor risk perception and market acceptance among different program types. *Figure 3* contrasts the decrease in multi-seller ABCP outstanding from other conduits rated by Moody's.

Figure 3: *Moody's Rated Total vs. Multi-seller ABCP Outstanding (USD Billions)*



Source: Moody's Investor Service, 2015 Outlook – Global ABCP, December 18th, 2014

Regulatory Changes

In the aftermath of the crisis, regulatory focus shifted sharply towards enhancing and safeguarding financial stability. To that end, a series of reforms were enacted which, though generally not directly impacting the ABCP market, benefit investors by strengthening sponsor banks and encouraging them to fully support their conduits. On the flip side, new regulations also resulted in some bank sponsors abandoning this funding channel on cost and capital considerations. We consider the following to be the most important:

The Volcker Rule: Adopted on Dec. 10th, 2013 the Volcker Rule was aimed at preventing banks from engaging in risky investment activities. As it relates to the ABCP market, it states that a bank can only own or sponsor a conduit that has "full and unconditional liquidity coverage" from a "regulated liquidity provider". Unlike a standard liquidity support agreement which does not cover problems due to credit concerns, this liquidity support essentially also provides 100% credit support. As a result, it effectively transfers the conduit's liabilities to the support provider's balance sheet.

Risk Retention Rule: To prevent excessive risk taking by securitization sponsors, several regulators in the U.S. jointly implemented the Risk Retention Rule in October 2014. Under the rule, sponsors must retain at least 5% of the credit risk in their securitized portfolios. The rule's special ABCP option requires each eligible "originator-seller" within the conduit, as opposed to the sponsor itself, to retain a 5% economic interest. However, the sponsor is responsible for monitoring and enforcing the rule, or else it is itself on the hook for any shortfalls. In addition, eligible conduits must have 100% liquidity support which covers asset and other concerns, similar to Volcker Rule's provisions.

LCR Ratio: The liquidity coverage ratio requirement, adopted in the US in September 2014, requires banks to hold at all times sufficient amounts of high quality liquid assets to cover all possible net cash outflows within a period of 30 days. With respect to bank-sponsored conduits, the sponsor itself is deemed to have issued the ABCP and is required therefore to assume an outflow equal to 100% of ABCP maturing within 30 days. This ensures the availability of liquid assets to fulfill any liquidity obligations to the conduit.

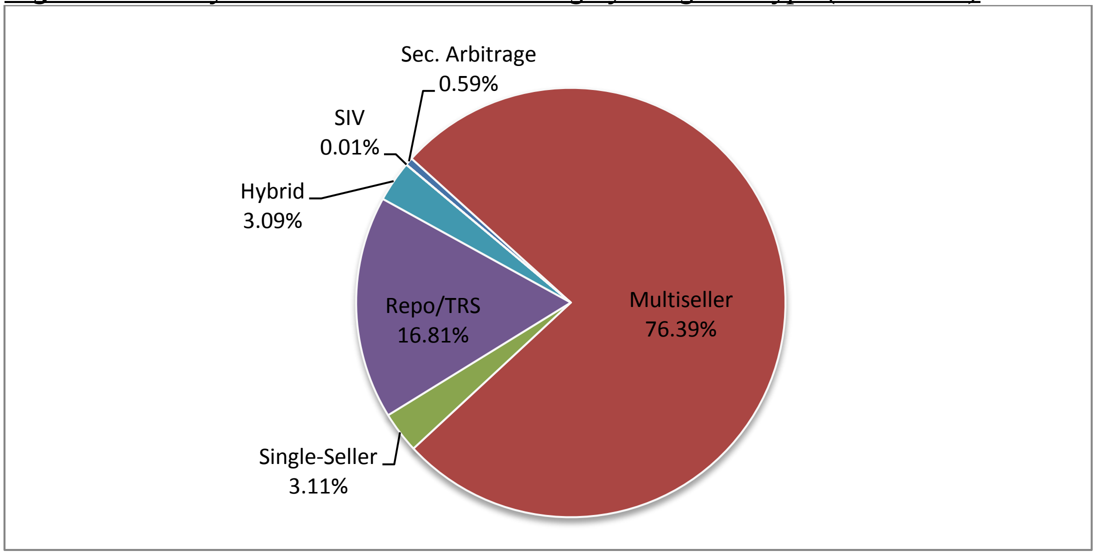
In recent years, conduits began adding language to permit the issuance of notes with put/call provisions. This development was in response to the LCR ratio requirement, in that it provides greater flexibility in managing maturities so as to reduce exposure under the LCR calculation. The LCR Rule led to some banks' decision to exit the ABCP market because of the liquidity impact on their balance sheet.

Regulation AB II: In 2010 and 2014, the SEC proposed and re-proposed revisions to Regulation AB regarding disclosure, communication, and reporting for asset-backed securities (ABS). Dubbed Regulation AB II, the new rule would improve asset level information disclosure. The final rule adopted in August 2014 excluded most ABCP programs from the expanded information and delivery requirements as part of the Rule 144A exemption. Without the exemption, concerns with releasing individual consumers' credit statistics to the public would have had negative impact on the conduits' practical use.

The Market Today

Over the last eight years, the ABCP market has evolved significantly. Flawed structures disappeared and surviving programs are fully backed by stronger sponsors, or participating liquidity providers. Regulations enhanced market transparency and require explicit risk retention by sellers, resulting in a more stable market. As seen in *Figure 4*, the market make-up has tilted substantially toward the more traditional multi-seller structures.

Figure 4: *Moody's Rated ABCP Outstanding by Program Type (June 2015)*



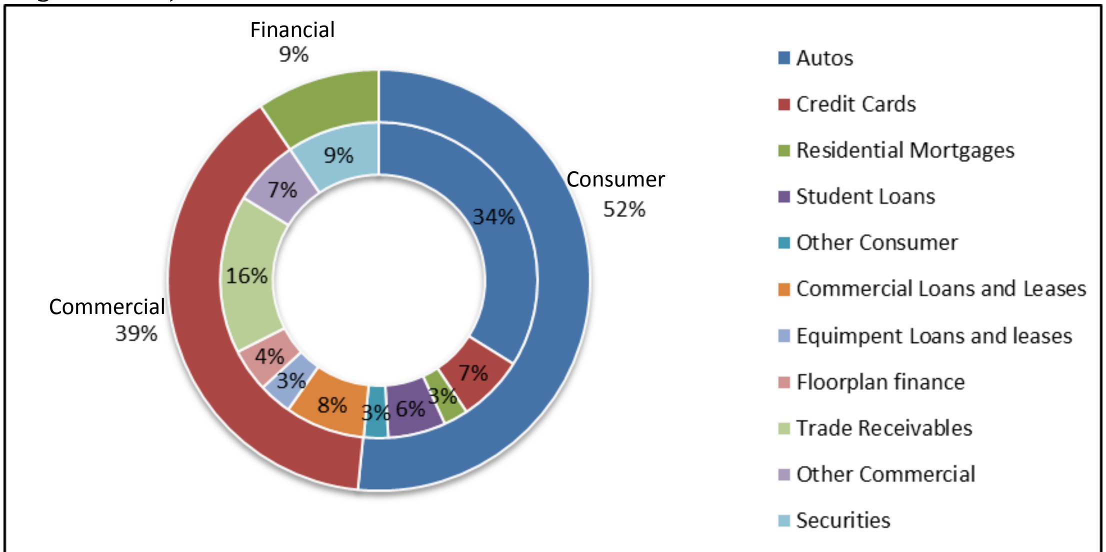
Source: Moody's ABCP Program Index, Moody's Investors Service

ABCP Advantages

With sufficient understanding of the underlying credit risk, the inclusion of ABCP in a corporate cash portfolio may enhance potential yield while reducing portfolio risk. Examples of the benefits of ABCP include:

Better Risk Diversification: ABCP offers investors a wider selection of commercial paper programs with less risk correlation to other investment types, such as corporate and agency securities. Multi-seller ABCP programs in particular, may help to reduce issuer and asset concentration risk, while the inclusion of ABCP in investment policies may allow short-term investors to better comply with diversification requirements.

Figure 5: *Asset Types Financed in Moody's Rated US Multi-seller Conduits (As of August, 2014)*



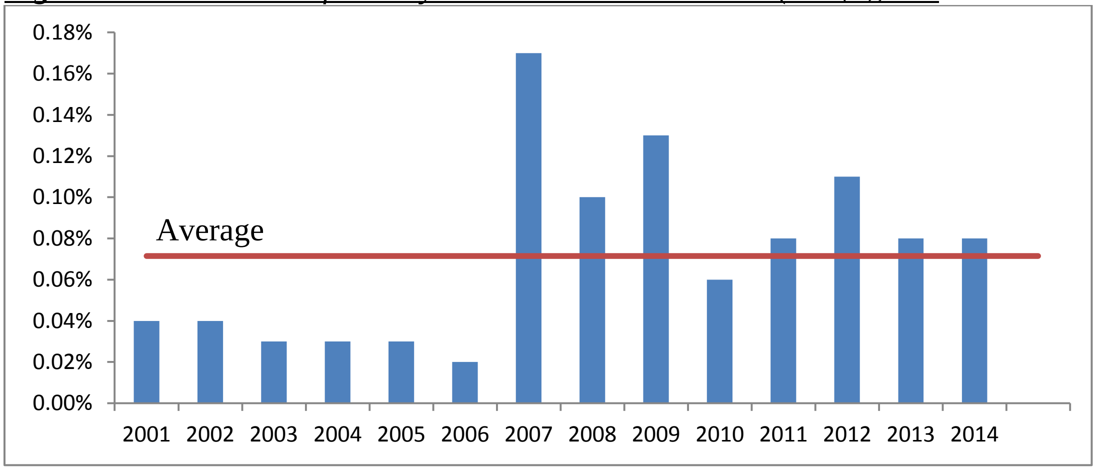
Source: Moody's Investor Service, 2015 Outlook – Global ABCP, December 18th, 2014

Reduced Idiosyncratic Credit Risk: During past credit cycles, many investors were exposed to unsecured investment-grade securities that lost their A-1/P-1 status in a short period of time. Multi-seller ABCP programs backed by portfolios of assets help limit credit risk of individual conduits, thereby reducing exposure to issuer-specific credit risk. The full unconditional liquidity support requirements from sponsors add an additional layer of protection against default. *Figure 5* illustrates the general composition of a multi-seller asset portfolio

Attractive Yield: In their early days, ABCP programs generally offered competitive yields relative to unsecured corporate CP. Due to its complexity and the need for extensive research, ABCP usually rewards investors with 2 to 20 basis points in extra yield. Today, ABCP spreads over traditional CP remain a prime motivator for investors.

In comparing the yields of 90-day ABCP rated A-1(+)/P-1 against similarly rated non-asset backed commercial paper yields, we found the yield advantage to be 7 basis points on average between 2001 and 2014. As *Figure 6* indicates, the yield spread remained high following the financial crisis as demand continued to be subdued despite improved risk characteristics. Between 2011 and 2014, the yield advantage averaged 9 basis points.

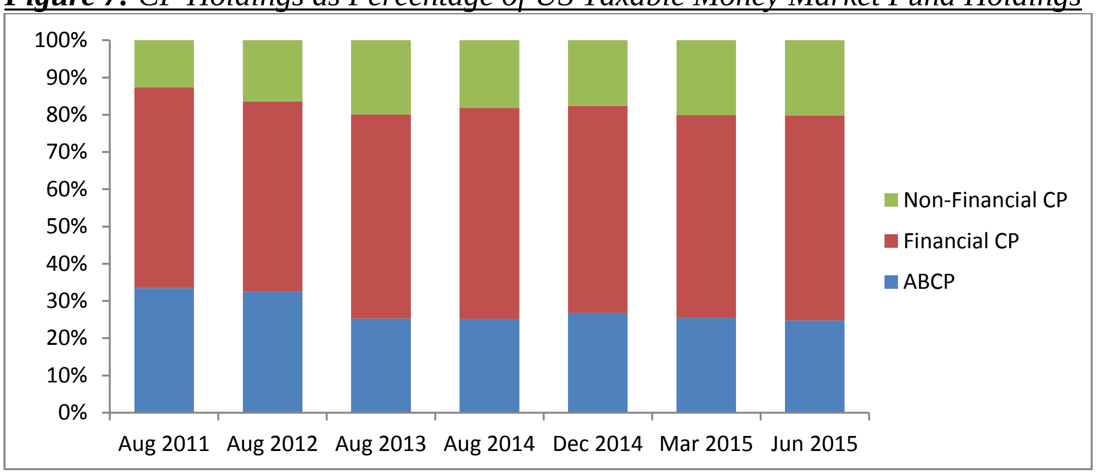
Figure 6: *Excess Yield of 90-Day ABCP over Financial CP (A-1 (+), P-1*



Source: Board of Governors of the Federal Reserve System (US), FRED Economic Data, St. Louis Fed.

Investor Acceptance: Despite the negative association with the financial crisis, ABCP continues to be a core asset category in prime money market fund portfolios. With economic recovery on the way and regulatory uncertainties resolved, we expect ABCP outstanding to remain stable and investor acceptance to grow.

Figure 7: *CP Holdings as Percentage of US Taxable Money Market Fund Holdings*



Source: ICI, Monthly Taxable Money Market Fund Portfolio Data

Figure 7 shows the composition of commercial paper holdings in US taxable money market funds. It indicates that, over the last four years, about 25% of all CP held by the funds was in ABCP.

Risk Considerations

While ABCP may provide some risk mitigation in an investment portfolio, it may carry other risks associated with securitized debt.

Structural Risk: Unlike a traditional corporate issuer, whose business and financial risks are relatively easy to understand and analyze, the creditworthiness of an ABCP program is affected by its status as a special purpose entity, which involves risks due to multiple parties and complex legal arrangements. For example, even though voluntary bankruptcy of the issuer is prohibited, some language may be subject to interpretation by a local court of law. Because the structure is difficult to understand, the program may be subject to abuse or neglect.

Credit & Liquidity Risk: The liquidity risk of ABCP is the danger that collections from collateral assets may not arrive in time to provide funds to repay maturing balances. The credit risk addresses the likelihood that collateral will suffer losses and ultimately not be fully collectible. In the post-crisis regulatory environment, both risks are transferred to the sponsoring bank. This means that the counterparty risk of the sponsor is more important today than before the financial crisis.

Operational Risk: This risk stems from the complex administrative tasks performed by the sponsor. The bank personnel are responsible for the purchases and collections of collateral assets, making payments to ABCP investors, coordinating among all parties to an ABCP program (see Appendix A), ensuring proper documentation, performing due diligence, and so on. Since this risk is difficult to assess by an outsider, investors should consider the credit strength of the sponsor bank, its history and experience in ABCP administration, and the program's relevance to the bank's economic interest as some of key operational risk measures.

Untangling the ABCP Web for Cash Investors

Recent financial reforms have had a profound impact on the structure of the ABCP market, altering significantly the factors and circumstances that the diligent corporate cash investor must take into account prior to investing. Here we provide a practical guide of evaluating program risks for the novice ABCP investor. Bear in mind that some of the complicated subjects have been oversimplified for illustrative purposes.

Strength of Program Administrators: ABCP programs are special-purpose entities that exist only in legal documents. For a bank sponsored program, the sponsor is ultimately responsible for the program's liabilities under the full support requirement of the Volcker Rule. This means that the credit strength of a program is closely tied to that of its sponsor bank, making this the focal point of the selection process. Investors should refrain from purchasing ABCP administered by banks that they would not invest in directly.

Types of External Support: Some programs are run directly by the sponsor banks, while others by independent administrators who run a collection of fully supported collateral pools. Investors should evaluate independent programs based on the credit strength of the syndicate of sponsors as a whole and individually. Since ABCP is backed by the sponsors collectively, a weak sponsor could weaken the entire program.

Types of Programs: Of all the ABCP programs outstanding, the majority are traditional multi-seller programs. In a multi-seller program, the sponsoring bank combines collateral assets from several sellers who bring in a multitude of obligors in a wide variety of industries, offering ABCP investors instant risk diversification. Multi-seller programs backed by trade, auto, and credit card receivables are generally easier to understand and less risky than other types.

"Repo-backed CP" programs are backed by tri-party repurchase agreements that the conduit enters into with a number of banks. This type of structure invests the proceeds from the issuance of ABCP into repo agreements with matching maturities. Investors should be aware that credit risk of this type of instrument is dependent on the credit quality of the conduit's counterparties.

Collateral Asset Quality: Investors should distinguish the programs by their collateral asset quality by type, maturity, credit ratings, country of origin, and establish a tolerance threshold prior to investing. The data quality of periodic portfolio performance statistics provided by the program administrators can be a relevant investment selection consideration. Although still a good practice, the 100% unconditional liquidity support requirement makes asset collateral examinations a secondary consideration after the counterparty risk of the sponsor.

Conclusion

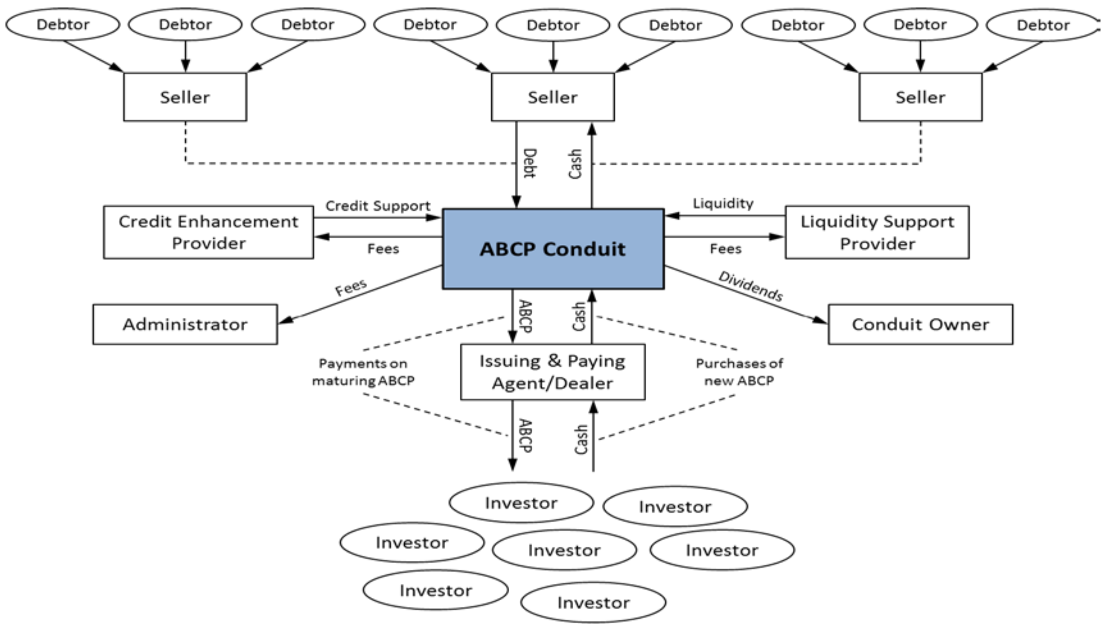
ABCP can be an appropriate investment vehicle in large corporate treasury accounts due to its liquidity, flexibility, and yield potential. Different risk concerns among programs require dedicated credit expertise and regular asset collateral monitoring.

The recent financial crisis revealed shortcomings of the less creditworthy structures, while the more traditional multi-seller conduits persevered. Despite lower issuance and on-going investor skepticism, the mechanism of ABCP structures improved due to new regulatory measures.

While the complexity of various programs may be intimidating, corporate cash investors may benefit from selecting some of the more traditional, conservative, and higher quality ABCP names for their portfolios. Specifically, investors may be well served by investing in traditional, multi-seller, receivables-backed programs associated with banks with strong credit ratings and track records of ABCP expertise.

Appendices

Appendix A: *Major Components of the traditional multi-seller ABCP structure*



Appendix B: *Largest ABCP Programs (As of March 2015)*

Rank	Program Name	Administrator	CP Outstandings	Program Type
1	Kells Funding LLC	FMS Wertmanagement	15,602.00	Repo/TRS
2	Old Line Funding LLC	Royal Bank of Canada	11,461.46	Multiseller
3	LMA S.A. / LMA Americas LLC	Credit Agricole	11,170.81	Multiseller
4	Alpine Securitization Corporation	Credit Suisse	9,643.60	Multiseller
5	Chariot Funding Limited / Chariot Funding LLC	JPMorgan Chase Bank	8,970.00	Multiseller
6	MetLife Short Term Funding LLC	Lord Securities Corporation	8,907.76	Single-Seller
7	Collateralized Commercial Paper Co., LLC	JPMorgan Chase Bank, N.A.	8,681.35	Repo/TRS
8	Jupiter Securitization Company LLC	JPMorgan Chase Bank	8,632.00	Multiseller
9	Cancara Asset Securitisation Limited / Cancara Asset Securitisation LLC	Lloyds Bank PLC	8,611.11	Multiseller
10	Bedford Row Funding Corp.	Royal Bank of Canada (New York)	8,258.00	Repo/TRS
11	Regency Markets No. 1 LLC	HSBC Bank PLC	8,187.86	Multiseller
12	Victory Receivables Corporation	Bank of Tokyo-Mitsubishi UFJ	7,961.00	Multiseller
13	Gotham Funding Corporation	Bank of Tokyo-Mitsubishi UFJ	7,612.00	Multiseller
14	Collateralized Commercial Paper II Co, LLC	JPMorgan Chase Bank, N.A.	6,782.73	Repo/TRS
15	CHARTA, LLC	Citibank, N.A.	6,360.00	Multiseller
16	Atlantic Asset Securitization LLC	Credit Agricole	6,347.80	Multiseller
17	CRC Funding LLC	Citibank, N.A.	6,320.00	Multiseller
18	CAFCO, LLC	Citibank, N.A.	6,254.00	Multiseller
19	Sheffield Receivables Company LLC	Barclay's Bank PLC	5,877.00	Multiseller
20	CIESCO, LLC	Citibank, N.A.	5,867.00	Multiseller

Sources: Moody's Investors Service

Appendix C: *Largest Program Administrators (as of March 2015)*

20 Largest ABCP Program Administrators
1Q15 Average ABCP Outstandings

Administrator	$ Millions	# Issuers	Market Share (%)
JPMorgan Chase Bank	35,934	6	*11.4%*
Royal Bank of Canada	28,375	6	*9.0%*
Citibank, N.A.	28,001	5	*8.9%*
Bank of Tokyo-Mitsubishi UFJ	26,300	9	*8.4%*
Credit Agricole	17,519	2	*5.6%*
FMS Wertmanagement	15,602	1	*5.0%*
TD Securities Inc.	10,577	6	*3.4%*
Credit Suisse	9,644	2	*3.1%*
Société Générale	9,590	2	*3.1%*
Lord Securities Corporation	8,908	1	*2.8%*
Barclay's Bank PLC	8,862	2	*2.8%*
Lloyds Bank PLC	8,611	1	*2.7%*
HSBC Bank PLC	8,188	1	*2.6%*
Bank of New York Mellon	7,450	3	*2.4%*
Sumitomo Mitsui Banking Corp.	6,650	3	*2.1%*
BNP Paribas	6,103	2	*1.9%*
Bank of Nova Scotia	5,446	1	*1.7%*
Rabobank Nederland	4,933	1	*1.6%*
Natixis	4,883	2	*1.6%*
Deutsche Bank AG	3,353	4	*1.1%*
other	59,413		*18.9%*
Total	**314,341**		**100%**

Sources: Moody's Investors Service

[1] Moody's ABCP Program Index as of 6/30/2007, Moody's Investors Service

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