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TENDER OPTION BONDS UPDATE

JUNE 2011

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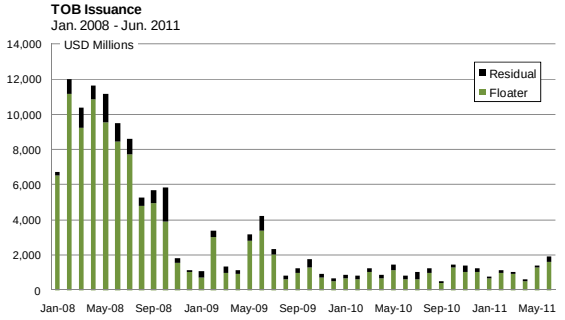
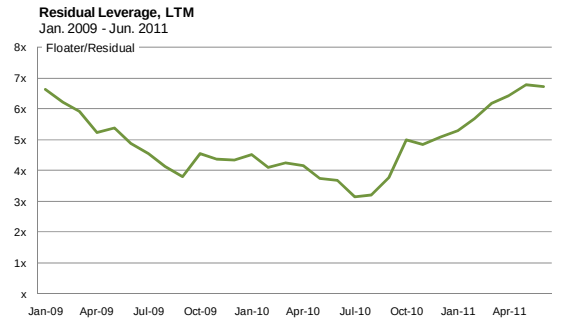
The Securities Industry and Financial Markets Association (SIFMA) brings together the shared interests of hundreds of securities firms, banks and asset managers. SIFMA's mission is to support a strong financial industry, investor opportunity, capital formation, job creation and economic growth, while building trust and confidence in the financial markets. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (GFMA). For more information, visit www.sifma.org.

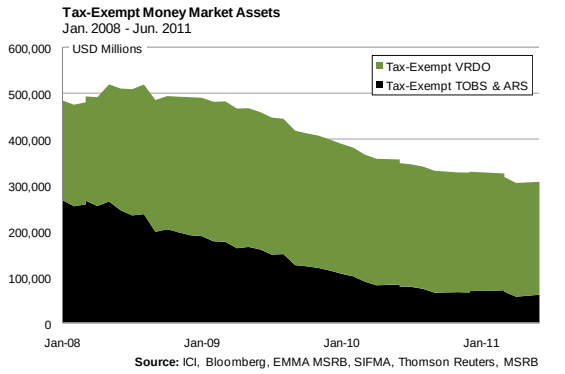
SUMMARY[1]



Sources: Bloomberg, MSRB EMMA, SIFMA Calculations
Missing residual and floater par amounts use median floater and residuals from trust series for given year.



Sources: Bloomberg, MSRB EMMA
Only trust series with known floater and residuals par are used. Leverage based at time of original issuance and does not incorporate additional issuance in later periods.



Source: ICI, Bloomberg, EMMA MSRB, SIFMA, Thomson Reuters, MSRB

Tender-option bond ("TOB") trusts are a secondary market derivative product in which the trust purchases municipal bonds, loans, or custodial receipts and funds the purchases with the issuance of two classes of certificates: a floating-rate and a residual interest certificate. TOB trust issuance reached a peak in 2007, when more than $140 billion was sold (compared to $424.5 billion of primary municipal issuance in 2007), compared to the $7 billion sold in the first six months of 2011.

The floating-rate certificate (often called the TOB or floater) has a floating rate that resets to some short-term index (typically the SIFMA swap index) and is typically credit-enhanced with a liquidity facility to allow par tenders. The residual interest certificate, which is usually a nominal principal amount of $5,000 to $25,000, receives the coupon of the underlying bonds less fees and the interest paid on the floater, and is sometimes called the *inverse floater*. For this piece, we refer these two classes as *floaters* and *residuals*, respectively, and aggregates will refer to both collectively unless otherwise specified.

Floaters in a TOB trust are often sold to money market funds, which means that the certificates and underlying collateral usually meet 2a-7 rules. Underlying bonds are usually highly rated or enhanced with additional credit enhancements (e.g., insurance, letters of credit, etc). On termination or liquidation of the TOB trust, floater holders are typically entitled to receive par, accrued interest, and often a small portion of any gains on sale of the collateral. A floater is functionally similar to a primary market variable-rate demand obligation (VRDO).

Since the residual collects most of the remaining difference between the coupon paid to the collateral in the trust and the interest paid to the floater, the residual benefits from a steep yield curve environment. Leverage is usually determined by the residual buyer beforehand and can fluctuate over the life of the trust, either through additional issuance, buybacks, or early paydowns/redemptions of trust bonds. The residual or residuals are typically sold to qualified institutional buyers or kept by the trust administrator. Residual features depend highly on the TOB trust structure: a residual holder may be entitled to receive principal pro-rata or subordinate to the floater on termination or liquidation of the trust; may also be entitled to receive the majority of any gains on the sale of the trust collateral; may also benefit from ensured cash flow through maximum rate caps on floaters; etc. Residual holders usually also retain the right to enforce a mandatory tender of the floater certificates, but may also be responsible for making up the difference of the proceeds and the floater's par and accrued interest if there is a shortfall.

[1] The report is an attempt to quantify the size of the TOB market, as well as identify common features of TOBs in the period from 2009 to the first half of 2011. Data are sourced primarily from Bloomberg and supplemented by MSRB EMMA data. A best efforts attempt was made in flagging out custodial receipts and identifying residual data. Unless otherwise noted, data are only for long-term TOB issuance (with a maturity greater than 13 months) as most short-term floater/inverse floater types tend to be for tax receipts.

Long-term TOB Issuance by Month[2]

Jan. 2008 – Jun. 2011

	Dollar Amount (USD Millions)		# of Securities		Trust Bond Characteristics		Other
Month	Floater	Residual	Floater	Residual	Average Bond Coupon	Average Tenor at Time of Deposit	Bond Buyer 30 GO - SIFMA swap (bps)
Jan-09	707.90	393.90	52	68	5.14	25.39	454.75
Feb-09	2,994.10	379.15	130	150	5.14	25.12	431.25
Mar-09	958.51	371.23	68	122	5.16	22.68	443.25
Apr-09	917.10	242.15	75	100	5.37	24.64	423.40
May-09	2,828.27	367.63	110	130	5.13	22.76	412.50
Jun-09	3,376.06	836.96	198	232	5.17	23.54	445.25
Jul-09	2,025.78	327.45	118	133	5.18	24.87	438.20
Aug-09	593.08	201.54	42	56	5.32	24.54	422.92
Sep-09	992.04	253.25	65	74	5.18	25.34	390.70
Oct-09	1,296.65	460.74	78	92	5.33	24.76	394.90
Nov-09	718.84	198.80	50	56	5.33	25.11	411.25
Dec-09	532.35	121.87	41	46	5.22	26.80	395.40
Jan-10	686.91	193.59	49	68	5.23	25.81	415.00
Feb-10	625.73	198.38	31	36	5.22	26.29	416.00
Mar-10	1,019.16	243.40	44	48	5.10	22.80	411.35
Apr-10	667.01	206.23	45	65	5.05	23.43	412.20
May-10	1,136.73	295.15	75	85	5.12	21.55	400.25
Jun-10	624.35	170.31	43	45	5.16	24.30	407.65
Jul-10	602.05	427.67	62	64	5.14	26.00	404.60
Aug-10	960.07	261.62	67	73	5.04	25.84	375.25
Sep-10	418.20	67.74	30	31	5.10	24.69	359.20
Oct-10	1,277.55	178.59	48	50	4.76	21.40	359.00
Nov-10	1,028.86	349.74	64	69	5.14	26.36	411.75
Dec-10	1,044.65	215.09	69	94	5.32	22.35	461.80
Jan-11	648.73	95.34	38	43	5.26	21.61	502.50
Feb-11	980.12	158.13	65	86	5.27	18.38	488.00
Mar-11	907.47	134.43	51	60	5.17	22.99	466.40
Apr-11	489.71	130.54	40	46	5.15	19.41	473.25
May-11	1,266.64	139.83	70	58	5.13	24.50	438.75
Jun-11	1,616.66	302.99	86	79	5.00	22.30	438.80

Source: Bond Buyer Bloomberg, EMMA MSRB, SIFMA Calculations

Missing par amounts on floaters and residuals are estimated by using median amounts issued from similar trust series in a given year; custodial receipts are not included in totals.

Collateral Characteristics

Collateral for TOBs tends to be quite uniform across trust series[3]: long-term, fixed-rate; tax-exempt, highly rated, exhibiting relatively stable prices. Trusts typically deposit no more than one CUSIP for each series and diversification of underlying collateral is typically not a priority.[4] By state, New York, California, Washington, Texas, and Puerto Rico bonds are the most common; together, these five states collateralize 58.1 percent of all trusts in the same 2.5-year period. About half of the bonds sourced by dollar amount are from the same issue year. By use of proceeds, water, general purpose, and healthcare sectors are generally popular. Underlying bond prices have gener-

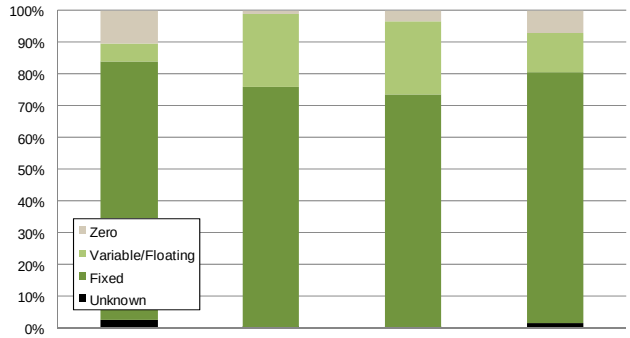
[2] Does not include short-term TOBs that mature in 13 months or less.

[3] Percentage breakdowns of trust collateral based on face value deposited into a trust, which may not reflect face value of the floater and residual if bonds are deposited at a premium or discount to par (e.g., zero coupons). For those trusts with no listed deposit amounts, bonds are assumed to be deposited at par in equal proportions, in an amount equivalent to the aggregate face value of the floater and residuals. If custodial receipts are deposited in the trust, the municipal CUSIP referenced in the receipt is used instead.

[4] The average number of unique CUSIPs deposited into a trust was 1.12 CUSIPs based on an examination of 2,000+ trust series from 2009 to the first six months of 2011. The median was 1 CUSIP and the range from 1 to 9 unique CUSIPs. Multiple deposits of the same CUSIP (at differing yields) are counted only once. If custodial receipts are deposited into a trust, the bond(s) referenced in the receipt are used in the analysis.

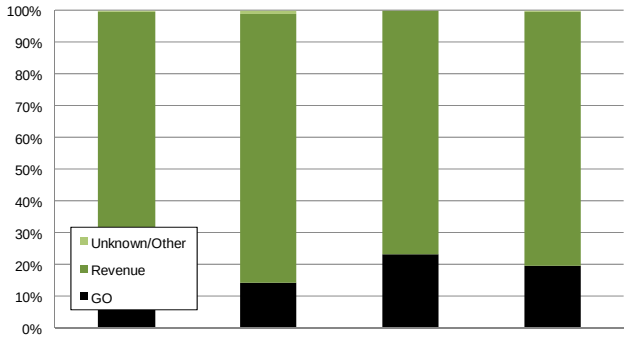
ally remained stable from 2009 to the first six months of 2011, despite the turmoil in late 2010. [5]

Trust Collateral by Coupon Type
2009 - 1H 2011



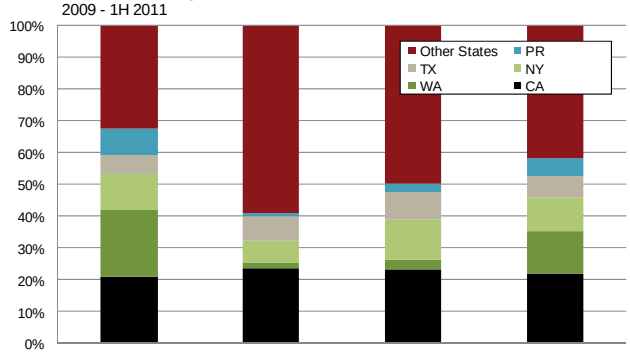
Source: Bloomberg, EMMA MSRB, SIFMA

Trust Collateral by Bond Type
2009 - 1H 2011



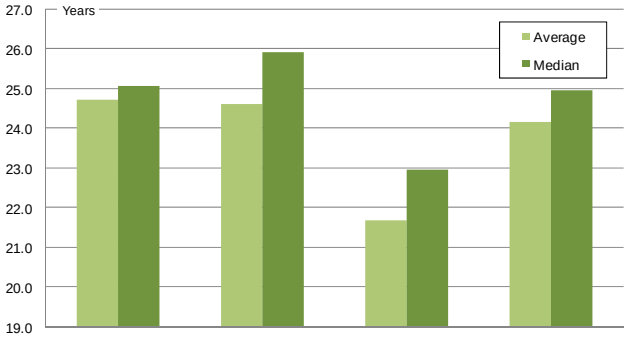
Source: Bloomberg, EMMA MSRB, SIFMA

Trust Collateral by State
2009 - 1H 2011



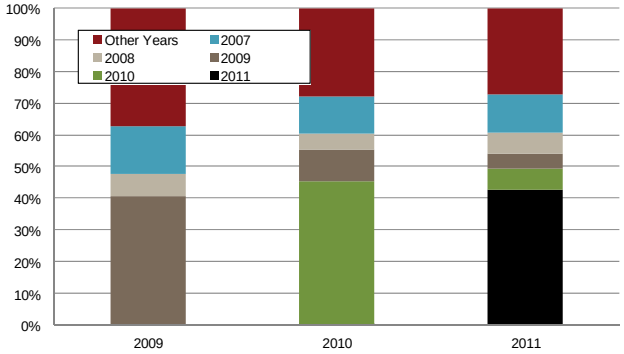
Source: Bloomberg, EMMA MSRB, SIFMA

Average and Median Bond Tenor At Time of Trust Deposit
2009 - Jun. 2011



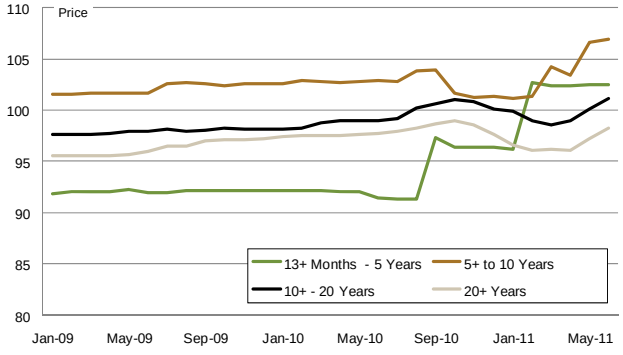
Sources: Bloomberg, EMMA MSRB, SIFMA

Trust Collateral By Year of Issue
2009 - 1H 2011



Sources: Bloomberg, EMMA MSRB, SIFMA

Underlying Trust Bond Prices By Tenor
Jan. 2009 - Jun. 2011



Sources: Bloomberg. EMMA MSRB, SIFMA

[5] Based on an examination of 65,895 trades on 1,301 CUSIPs from 2009 to June 2011. For charts "Underlying Trust Bond Prices by TOB Issue Year" and "Underlying Trust Bond Prices by Tenor," prices are simple average prices of all qualifying trades within a single month; multiple trades of the same CUSIP in a single month are averaged prior to being averaged in aggregate so all CUSIPs have equal weight in the price index. Prices carry forward from prior trades in following months if there are no trades made in a single month and may carry all the way back to original issue price (or is assumed to be par if no original issue price is disclosed on EMMA). Tenor brackets based on tenor of bond at time of trade; a single CUSIP may migrate from one price index to another over time. CUSIPS of specific underlying trust series are also dropped from the indices over time if trust floaters are tendered. All trades are included, including interdealer trades. These prices do not include trades of certain collateral that are not considered municipal debt. If custodial receipts are deposited in a trust, the municipal CUSIP referenced in the custodial receipt is used instead for prices, issue/maturity date, etc.

TOB Trust Collateral by Use of Proceeds[6]

2009		2010		2011		2009 - 2011 1H	
Water	24.5%	Healthcare	20.0%	Healthcare	19.6%	Water	16.0%
General Purpose	15.1%	General Purpose	16.0%	GO	14.0%	General Purpose	13.4%
GO	12.5%	Higher Education	9.8%	General Purpose	13.3%	Healthcare	13.0%
Healthcare	11.3%	GO	8.8%	Transportation	9.5%	Facilities	12.8%
Higher Education	10.3%	Water	8.2%	School Districts	8.9%	GO	10.4%
School Districts	6.5%	Airport	4.2%	Water	8.0%	Higher Education	8.7%
Transportation	6.1%	Student Loan	4.2%	Higher Education	7.4%	School Districts	5.5%
Power	2.3%	School Districts	4.1%	Education	4.6%	Transportation	5.3%
Utilities	2.1%	Transportation	4.1%	Utilities	3.8%	Utilities	2.2%
Single Family Housing	2.0%	Other	3.4%	Student Loan	2.3%	Power	2.0%
Facilities	1.8%	Single Family Housing	3.1%	Power	1.7%	Airport	2.0%
Airport	1.6%	Multifamily Housing	2.6%	Development	1.7%	Single Family Housing	1.8%
Education	1.2%	Utilities	2.6%	Facilities	1.3%	Education	1.5%
Multifamily Housing	0.9%	Power	2.4%	Pollution	1.1%	Student Loan	1.4%
Other	0.5%	Development	2.0%	Multifamily Housing	1.1%	Multifamily Housing	1.2%
Tobacco Settlement	0.4%	Pollution	1.4%	Airport	0.9%	Other	1.1%
Student Loan	0.3%	Education	1.3%	Other	0.7%	Development	0.8%
Development	0.2%	Facilities	0.9%	Single Family Housing	0.2%	Pollution	0.5%
Pollution	0.2%	Housing	0.5%	Tobacco Settlement	0.0%	Tobacco Settlement	0.3%
Housing	0.0%	Tobacco Settlement	0.3%	Housing	0.0%	Housing	0.1%
Nursing	0.0%	Nursing	0.2%	Nursing	0.0%	Nursing	0.1%

Overlapping Collateral

New York municipal bond issuers were the most widely referenced bond collateral issuers across deals in the period from 2009 to the first half of 2011, both by number of deals and dollar amount:. About 60 percent of all issuers (329 of 549) referenced in this time period were in more than one TOB deal; 11.1 percent (61 issuers) were used in 10 or more deals.

2009

Issuer	# Deals
New York City Municipal Water Finance Authority	45
New York State Dormitory Authority	33
State of Washington	27
California Educational Facilities Authority	25
Illinois Finance Authority	23
City of New York, NY	22
City of Chicago, IL	21
Bay Area Toll Authority	18
Puerto Rico Sales Tax Financing Corp	18
Port Authority of New York & New Jersey	17

2010

Issuer	# Deals
Los Angeles Department of Airports	22
California Educational Facilities Authority	18
Salt River Project Agricultural Improvement & Power District	17
Metropolitan Pier & Exposition Authority	16
Connecticut State Health & Educational Facility Authority	16
New York State Dormitory Authority	15
District of Columbia	11
Illinois Finance Authority	11
Los Angeles Community College District	10
Colorado Health Facilities Authority	10

2011

Issuer	# Deals
New York City Transitional Finance Authority	16
California Health Facilities Financing Authority	15
New York City Municipal Water Finance Authority	13
New York State Dormitory Authority	10
Commonwealth of Puerto Rico	10
New Jersey Transportation Trust Fund Authority	8
Comal Independent Schol District	8
Illinois Finance Authority	8
State of Washington	7
City of Frisco, TX	6

2009 - 2011 1H

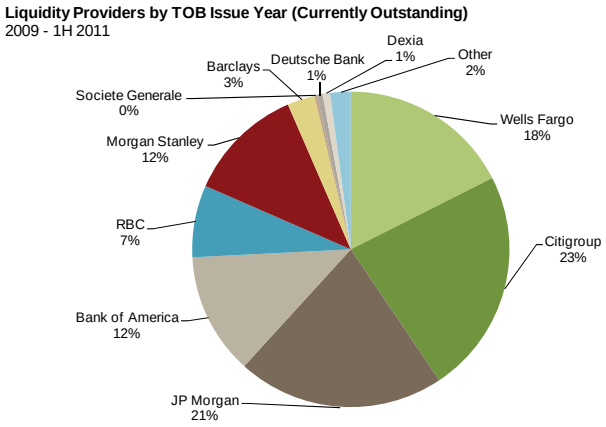
Issuer	# Deals
New York City Municipal Water Finance Authority	67
New York State Dormitory Authority	58
California Educational Facilities Authority	47
Illinois Finance Authority	42
State of Washington	39
California Health Facilities Financing Authority	35
Salt River Project Agricultural Improvement & Power District	29
City of Chicago, IL	29
Massachusetts Health & Educational Facilities Authority	29
New York City Transitional Finance Authority	28

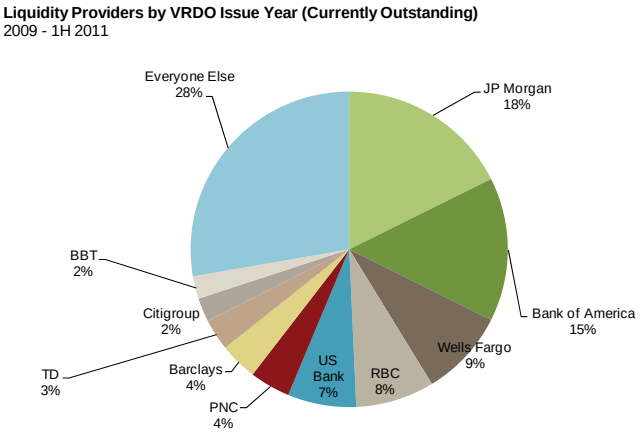
[6] Percentage breakdowns of trust collateral based on face value deposited into a trust, which may not reflect face value of the floater and residual if bonds are deposited at a premium or discount to par (e.g., zero coupons). For those trusts with no listed deposit amounts, bonds are assumed to be deposited at par in equal proportions, in an amount equivalent to the aggregate face value of the floater and residuals.

Liquidity Providers by Issue Year (Still Outstanding as of June 2011)

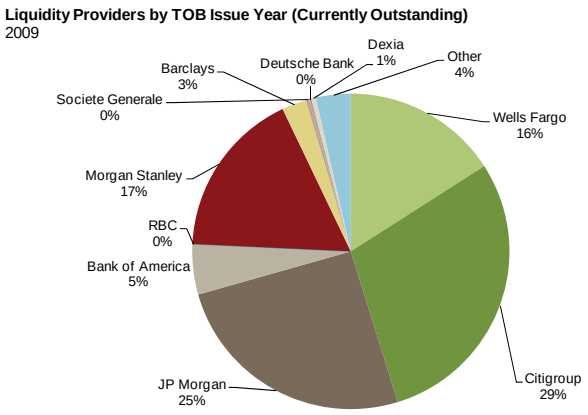
Liquidity providers are much more concentrated in the TOB space[7]…

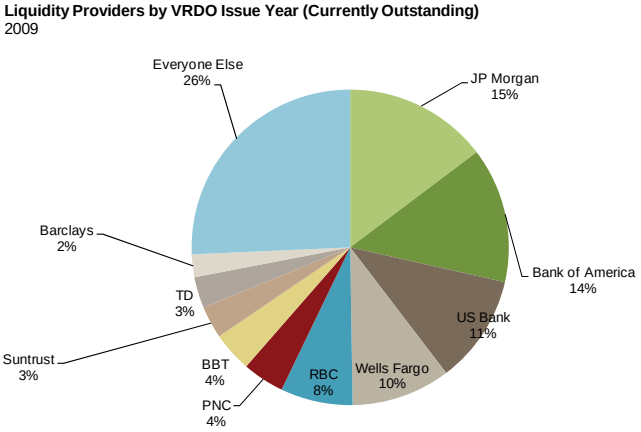
… Compared to VRDOs[8]





No more than a handful of banks (less than 15) have provided TOB liquidity in any given year since 2009. However, like the VRDO space, leading providers remain generally the same, although certain broker-dealers are more prominent in the TOB space. Even an annual breakout shows that the liquidity provider population and share remain relatively stable:

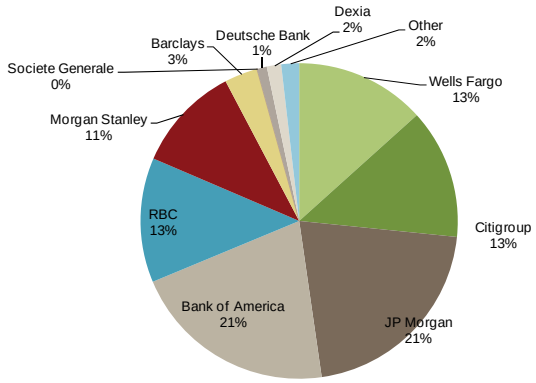




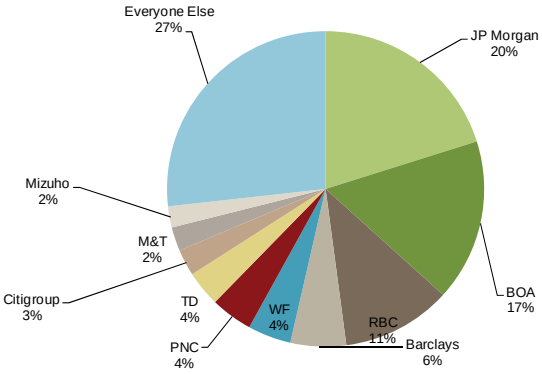
[7] TOB outstandings based in this case on the par amount of the floaters currently outstanding as of June 30, 2011 that were issued in the period from 2009 to the first half of 2011. Liquidity provider allocations based on dollar amount of outstanding; outstanding is based on dollar amount of original issue and therefore will not reflect partial tenders/sinking funds/odd lot redemptions, etc. Although less prevalent in the TOB space, certain CUSIPs with multiple liquidity facilities are counted multiple times in this analysis.

[8] For the purposes of this comparison, only bank liquidity providers are shown for the VRDO space. As with TOBs, liquidity provider allocations are based on dollar amount outstanding of the VRDO currently outstanding as of June 30, 2011, and issued in the period from 2009 to the first half of 2011. Outstanding figures are based on dollar amount of original issue and therefore will not reflect partial tenders/sinking funds/etc. CUSIPs with multiple liquidity facilities are counted multiple times in this analysis and allotted the full amount outstanding of the issue.

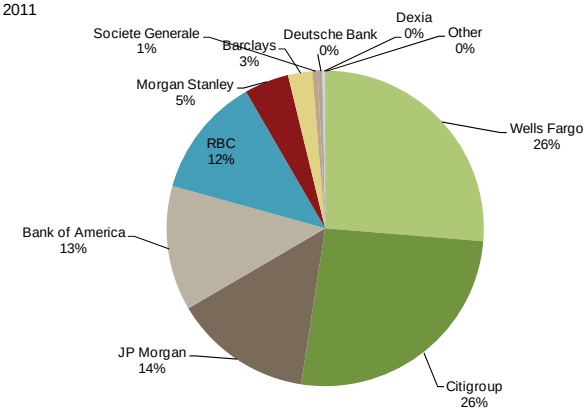
Liquidity Providers by TOB Issue Year (Currently Outstanding)
2010



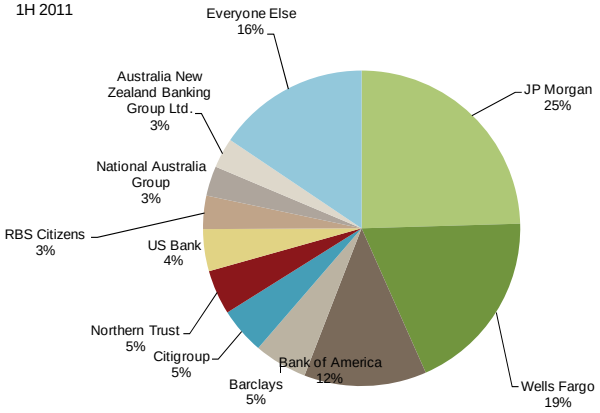
Liquidity Providers by VRDO Issue Year (Currently Outstanding)
2010



Liquidity Providers by TOB Issue Year (Currently Outstanding)
1H 2011

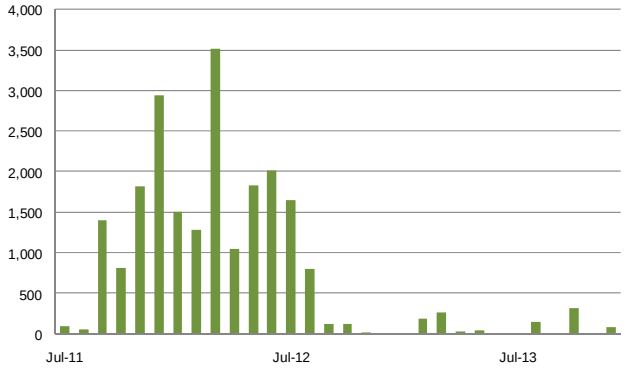


Liquidity Providers by VRDO Issue Year (Currently Outstanding)
1H 2011

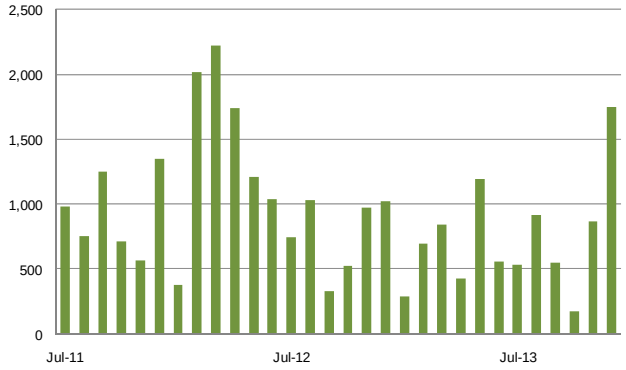


Liquidity facility terms for TOBs are much shorter than that of VRDOs; of all TOBs currently outstanding issued between 2009 and the first six months of 2011, 90.7 percent by dollar amount expire before December 2012. In the VRDO space, only 49.8 percent of all bank liquidity facilities expire before December 2012.

Outstanding Liquidity Expiration, TOBS
Jul. 2011 - Dec. 2013



Outstanding Bank Liquidity Expiration, VRDOs
Jul. 2011 - Dec. 2013



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