

Prepared by Texas Bond Review Board Staff

Texas Local Government Capital Appreciation Bond Analysis

Overview

Capital appreciation bonds (CABs) are sold at a discounted price called the par amount. They are often sold in combination with current interest bonds (CIBs). While the debt service for CIBs is paid throughout the life of the obligation, principal and interest on CABs is paid at maturity. Interest on CABs compounds semiannually and accumulates over the life of the bond, and the amount paid at the maturity is called the maturity value. Interest rates for CABs are generally higher than for CIBs, and CABs can be more expensive than CIBs because of the compounding interest; however, CABs can be an effective financing tool if they are used moderately and with reasonable terms.

Premium CABs (PCABs) provide a lower initial stated par amount and are sold with a premium. PCABs are issued to: (1) raise additional proceeds, (2) preserve debt limits, and (3) help local governments reach tax-rate targets. Local governments issue more PCABs than non-premium CABs.

Heavy use of CABs can result in rating agency downgrades.

CABs are often used to refund existing CAB and CIB debt.

CABs Issued

The below table shows that the total CAB par issued for Texas local governments during fiscal 2015 was 0.55% of the total CAB and CIB debt issued. School districts issuances accounted for 99.2% of the total CABs issued for local governments during fiscal year 2015. Of the total debt issued by school districts, 1.2% was issued as CAB debt. CABs have been used by school districts to enable them to remain under the 50-cent debt ceiling that limits the property taxes assessed for debt service costs to 50 cents per \$100 of assessed value. CAB issuances by school districts are general obligation (tax) debt repaid with ad valorem taxes.

The state of California passed legislation in October 2013 restricting the use of CABs. The legislation reduces the maximum maturity of a CAB issuance from 40 years to 25 years and limits a school district's repayment ratio to no more than \$4 in interest and principal for every \$1 of principal borrowed. For CAB debt issued in fiscal year 2015, Texas school districts in the aggregate will owe \$4.36 in interest and principal for every \$1 of principal borrowed. Additionally, the passage of House Bill 114 during the 84th Legislative Session has placed certain restrictions on the issuance of certain capital appreciation bonds payable from ad valorem taxes.

Issued in Fiscal Year 2015							
Entity Type	Total Par Issued (CIB and CAB)	CAB Par	CAB Par/Total Par	% of Total CAB Par Issued	CAB Premium	CAB Maturity Amount	% of Total CAB Maturity Amount
Independent School District	\$ 18,166,168,751.87	\$ 214,117,050	1.18%	99.18%	\$ 336,390,456	\$ 932,658,522	99.18%
Water District	4,592,288,647	\$ 1,763,647	0.04%	0.82%	4,991,049	7,720,000	0.82%
City	10,563,761,738		0.00%	0.00%			0.00%
Comm College / Junior College	947,360,000		0.00%	0.00%			0.00%
County	2,224,064,000		0.00%	0.00%			0.00%
Health & Hospital	177,306,000		0.00%	0.00%			0.00%
Other Special Districts	2,284,655,000		0.00%	0.00%			0.00%
Total	\$ 38,955,604,137	\$ 215,880,697	0.55%	100.00%	\$ 341,381,505	\$ 940,378,522	100.0%

Source: Texas Bond Review Board – Bond Finance Office

Three ratios have been developed to compare CAB issuances. The first is the “Maturity Value/Par” ratio which is calculated by dividing the CAB maturity amount by the CAB par amount and represents the total amount to be repaid (principal plus interest) compared to the par amount borrowed. This ratio disregards premiums received on PCABs.

The second is the “Maturity Value/Proceeds” ratio which is calculated by dividing the CAB maturity amount by the total CAB proceeds including the additional proceeds received as premium on PCAB issuances. This ratio represents the total amount to be repaid at maturity (principal plus interest) compared to the total amount of proceeds received (par plus premium).

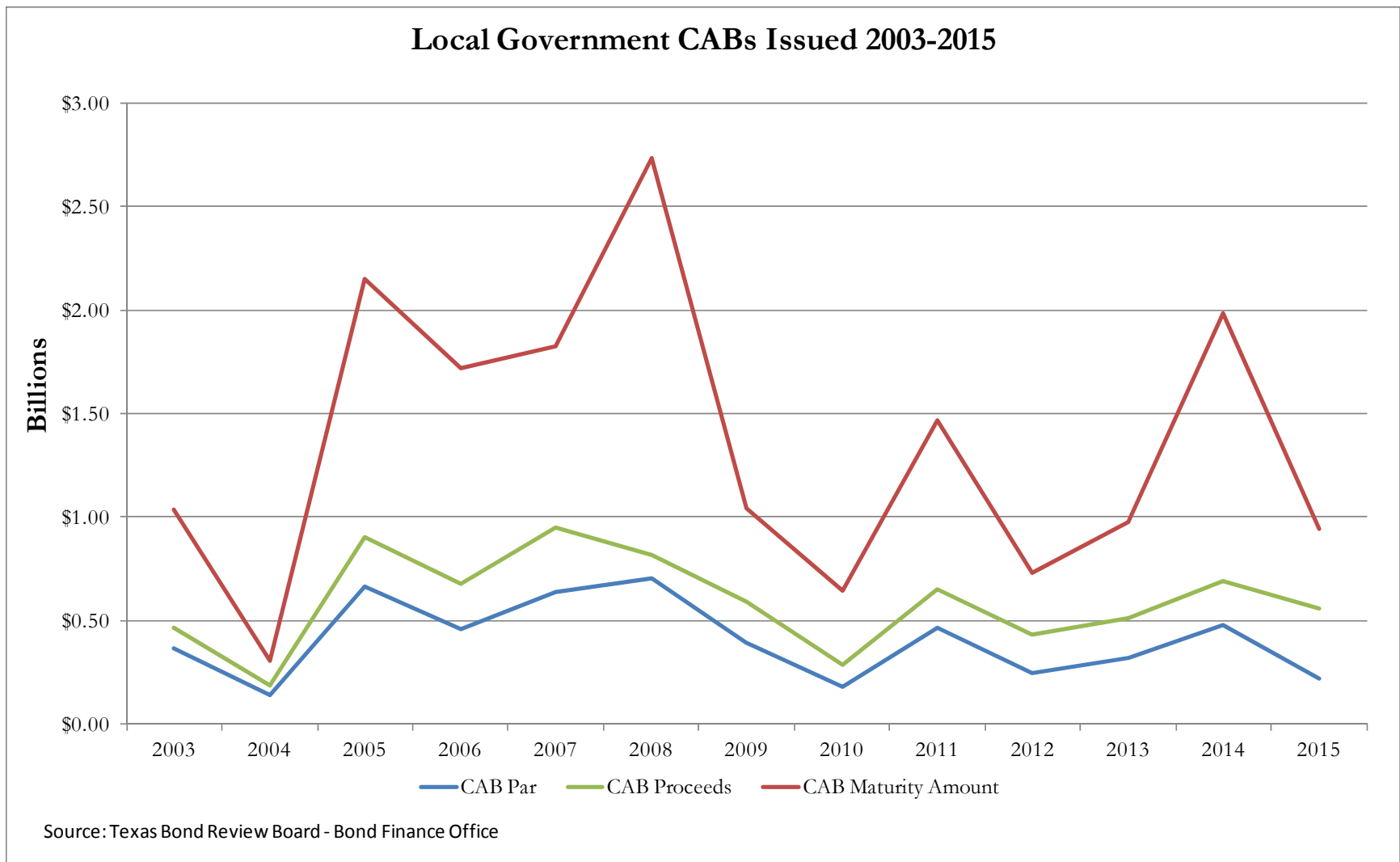
The third is the “Accreted Interest/Proceeds” ratio (AIPR) which is calculated by dividing the CAB maturity amount minus the original par amount by the total proceeds including the CAB premium. This ratio represents the total amount of interest to be paid at maturity compared to the total amount of proceeds received including premium (par plus premium).

The table below lists the top 20 most expensive CABs issued and outstanding as of fiscal-year end 2015 as defined by the “Maturity Value/Proceeds” ratio. CABs become increasingly more expensive as interest continues to compound with longer-term maturities. For comparison, the Maturity Value/Proceeds ratio for CIBs is generally less than 2.0 and the AIPR is generally less than 1.0. The decline in the Maturity Value/Proceeds ratio compared to the Maturity Value/Par ratio shows the affect of including the premiums on PCABs in the comparison.

Issuer	Issue	Total Years to Maturity	Maturity Value/Par	Maturity Value/Proceeds	Accreted Interest / Proceeds Ratio
Forney ISD	Unl Tax Ref Bonds Txbl Ser 2014A	39	12.69	10.87	10.01
Forney ISD	Unl Tax Ref Bonds Ser 2014	39	10.17	8.34	7.52
North Texas Tollway Authority	Spec Proj Sys First Tier CAB Rev Bds Ser 2011B	32	6.91	6.91	5.91
Forney ISD	Unl Tax Ref Bonds Txbl Ser 2013B	30	7.94	6.89	6.03
Lake Worth ISD	Unl Tax Ref Bonds Ser 2015A	17	133.28	6.77	6.72
Hutto ISD	Unl Tax Ref Bonds Ser 2012A	34	249.18	6.71	6.68
Austin	Combined Util Sys Rev Ref Bonds Ser 1990B	28	6.59	6.59	5.59
Anna ISD	Unl Tax School Bldg Bonds Ser 2010A	40	3,818.70	6.25	6.25
Anna ISD	Unl Tax School Bldg Bonds Ser 2011	40	6.17	5.87	4.92
Anna ISD	Unl Tax School Bldg Bonds Ser 2010	34	12.00	5.82	5.33
Forney ISD	Unl Tax Ref Bonds Ser 2013A	30	9.35	5.49	4.90
Comal ISD	Unl Tax School Bldg Bonds Ser 2009	28	15.71	5.32	4.98
Lake Worth ISD	Unl Tax Ref Bonds Ser 1995	28	8.25	5.31	4.66
Leander ISD	Unl Tax School Bldg Bonds Ser 2014C	35	5.32	5.26	4.27
Robstown ISD	Unl Tax School Bldg & Ref Bonds Ser 1994	27	13.16	5.26	4.86
Anna ISD	Unl Tax School Bldg Bonds Ser 2009	35	7.57	5.26	4.56
Galena Park ISD	Unl Tax School Bldg & Ref Bonds Ser 1996	35	6.09	5.11	4.27
Crowley ISD	Unl Tax Ref & School Bldg Bonds Ser 1993	30	9.87	5.04	4.53
Central Texas Regional Mobility Auth	Senior Lien Rev Bonds Ser 2010	30	5.03	5.03	4.03
Crowley ISD	Unl Tax Ref & School Bldg Bonds Ser 1991	25	69.87	4.99	4.92

Source: Texas Bond Review Board – Bond Finance Office

The chart below illustrates the total CAB par amount issued, the total proceeds received (including premiums on PCABs) and CAB maturity amount (total debt-service owed at maturity) since 2003.



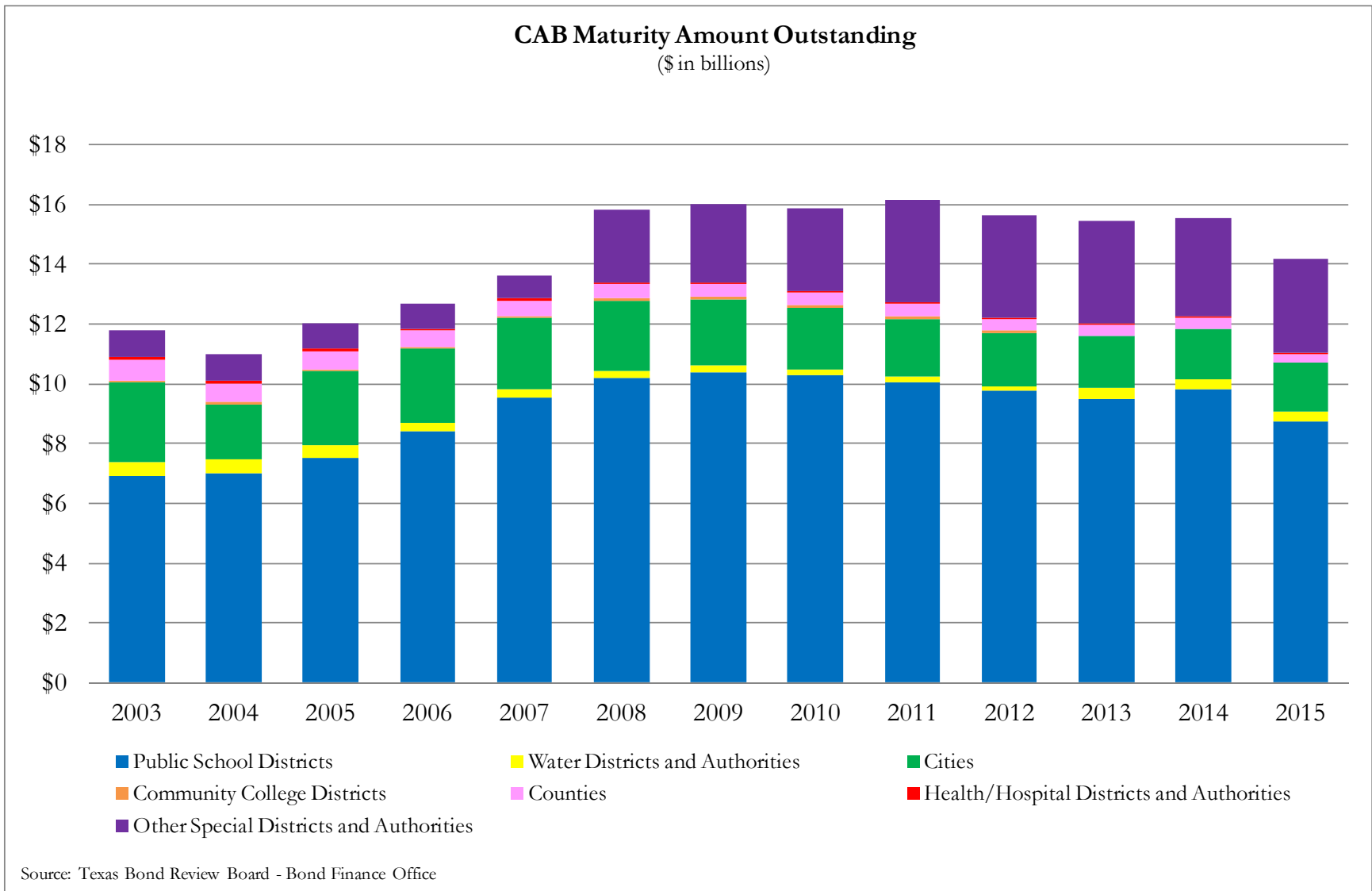
CABs Outstanding

The table below provides a comparison between the total CAB debt outstanding and total CIB and CAB debt outstanding for each local government entity. The CAB debt service (principal plus interest) is 4.23% of total debt-service owed by local governments. School districts owe the most CAB debt service at 61.32% of total CAB debt-service owed among all local governments. While CAB par was 1.72% of total CIB and CAB par outstanding at fiscal-year end 2015, CAB interest accounted for 8.52% of total interest owed.

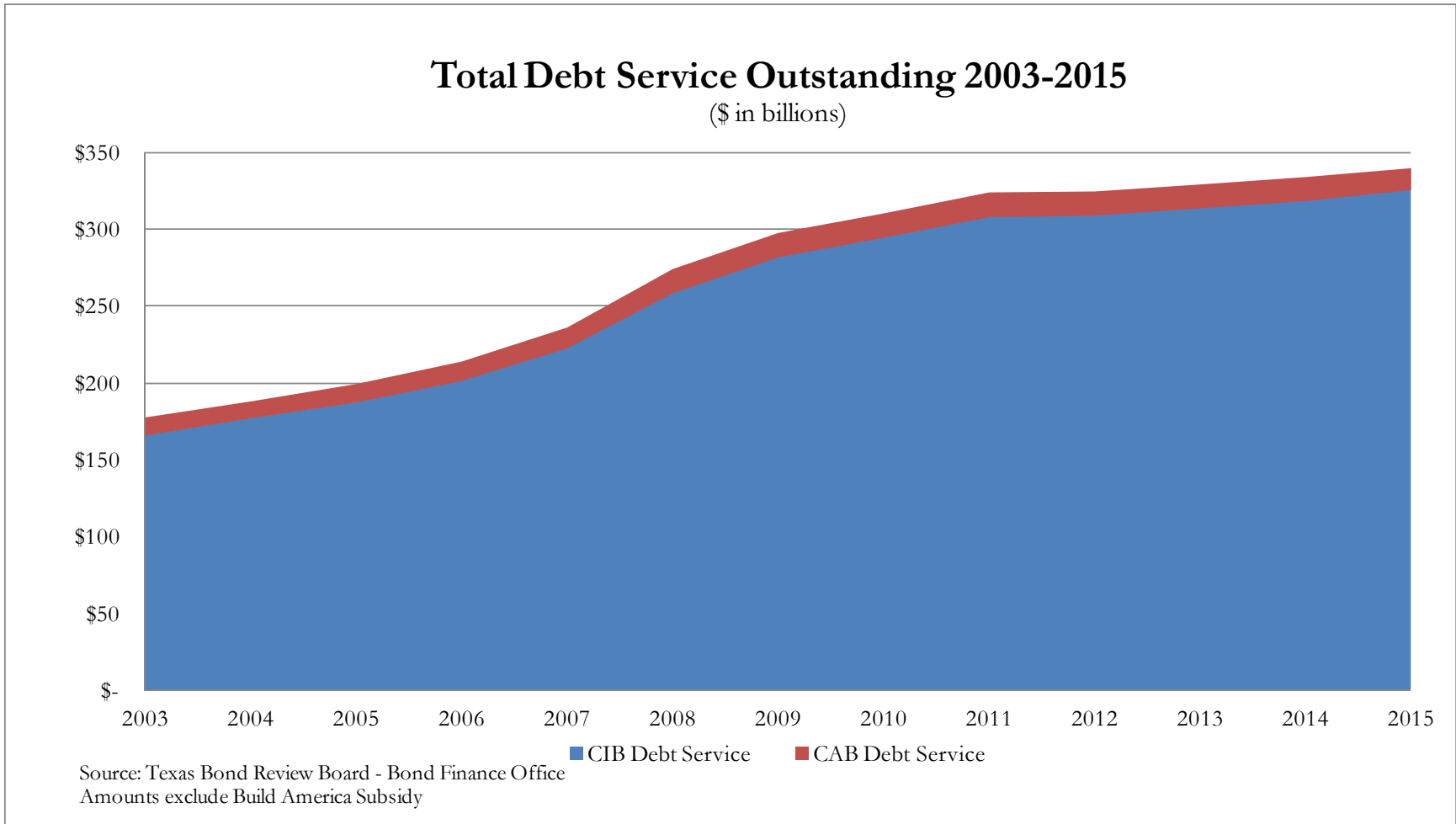
Entity Type	Outstanding as of August 31, 2015										
	Total Par Outstanding (CIB+CAB)	CAB Par Outstanding	CAB Par/Total Par	Total Interest Outstanding (CIB+CAB)	CAB Interest	CAB Interest/Total Interest	Total Debt Service (CIB+CAB)	CAB Maturity Amount Outstanding	CAB Maturity Amount/Total Debt Service	% of Total CAB Par Outstanding	% of Total CAB Maturity Amount Outstanding
Independent School District	\$ 72,350,726,024	2,149,854,796	2.97%	\$ 44,813,338,218	\$ 6,601,283,350	14.73%	\$ 117,164,064,242	\$ 8,751,138,146	7.47%	58.76%	61.32%
Water District	31,474,157,993	99,469,187	0.32%	16,672,844,182	216,194,076	1.30%	48,147,002,176	315,663,263	0.66%	2.72%	2.21%
City	69,898,946,053	362,419,341	0.52%	36,093,514,762	1,286,402,871	3.56%	105,992,460,815	1,648,822,212	1.56%	9.91%	11.55%
Comm College / Junior College	5,008,867,170	32,483,845	0.65%	2,609,488,068	32,741,152	1.25%	7,618,355,238	65,224,996	0.86%	0.89%	0.46%
County	14,300,079,149	98,383,661	0.69%	7,124,160,561	203,151,339	2.85%	21,424,239,709	301,535,000	1.41%	2.69%	2.11%
Health & Hospital	3,468,066,588	11,149,367	0.32%	2,343,094,334	26,756,617	1.14%	5,811,160,922	37,905,984	0.65%	0.30%	0.27%
OSD	15,942,629,922	904,937,359	5.68%	14,908,100,192	2,246,892,683	15.07%	30,850,730,114	3,151,830,042	10.22%	24.73%	22.08%
Total	\$ 212,443,472,899	\$ 3,658,697,555	1.72%	\$ 124,564,540,316	\$ 10,613,422,088	8.52%	\$ 337,008,013,215	\$ 14,272,119,643	4.23%	100.00%	100.00%

Source: Texas Bond Review Board – Bond Finance Office

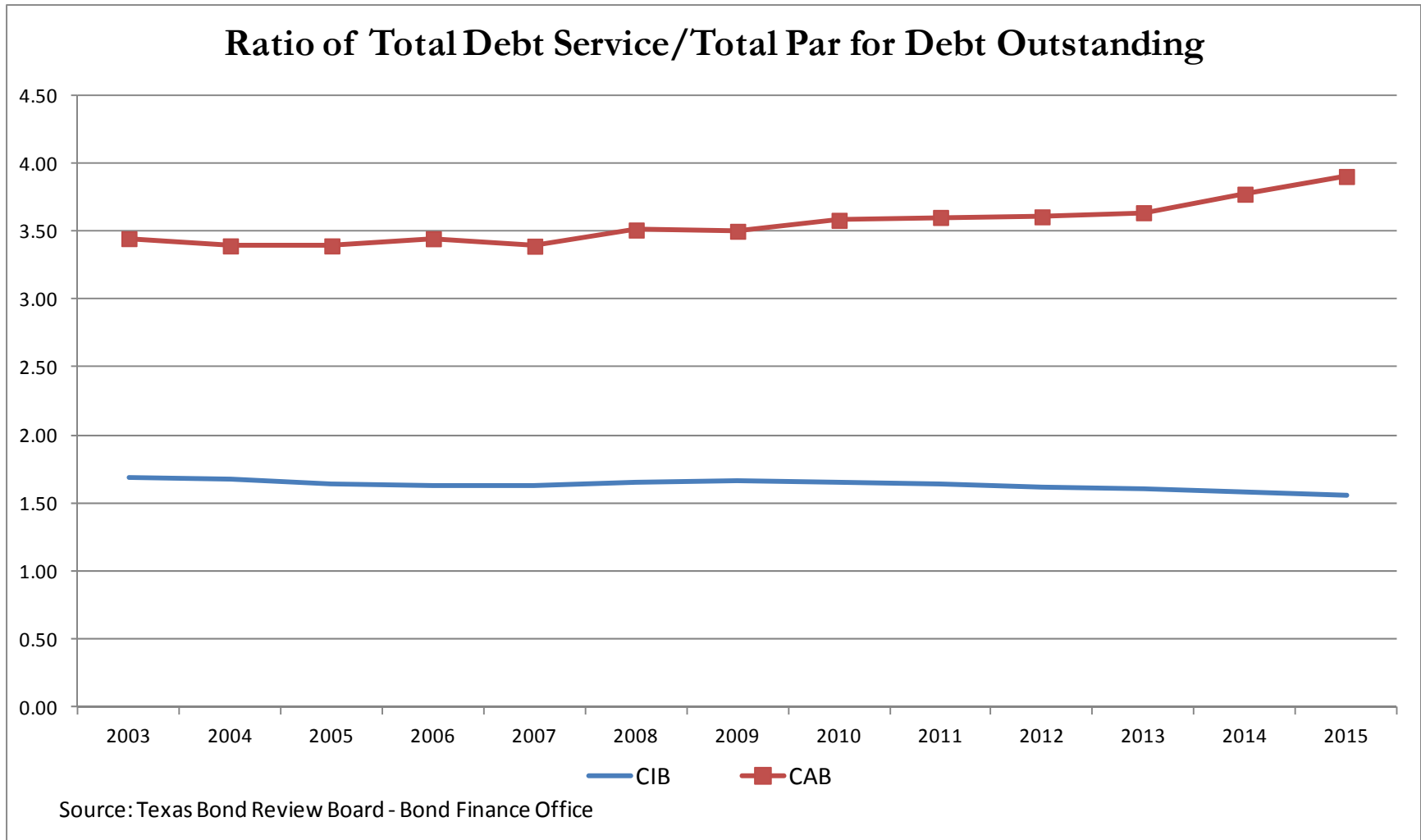
The chart below shows the maturity amount (principal plus interest) for each local government entity with CABs outstanding since 2003.



The chart below shows CIB debt-service and CAB debt-service for all local governments since 2003.



The chart below compares the ratio of total debt service to total par outstanding for CIB and CAB debt for all local governments. On average, issuers of CAB debt paid \$3.55 in principal and interest for every \$1 of principal borrowed since 2003 compared to \$1.63 for CIB debt.



The chart below compares the ratio of ISD debt service to ISD debt outstanding for CIB and CAB debt. On average, school districts paid \$3.49 in principal and interest for every \$1 of principal borrowed since 2003 for CAB debt compared to \$1.63 for CIB debt.

