

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.

Over the past decade, total CAB maturity amounts outstanding have decreased by 41.4 percent from \$16.46 billion in fiscal year 2009 to \$9.65 billion in fiscal year 2018. Additionally, CAB maturity amounts outstanding have decreased 11.4 percent from \$10.89 billion outstanding in fiscal year 2017. The outstanding CAB maturities range from 2019 to 2053.

Heavy use of CABs can result in rating agency downgrades.

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

CABs Issued

Table 4.1 shows that the total CAB par issued for Texas local governments during fiscal year 2018 was 0.05 percent of the total CAB and CIB debt issued. School districts issuances accounted for 94.2 percent of the total CABs issued for local governments during fiscal year 2018. Of the total par issued by school districts, 0.15 percent was issued as CAB par. 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.

For CAB debt issued in fiscal year 2018, Texas local governments will owe \$2.56 in interest and principal for every \$1 of principal borrowed.

The 84th Legislature passed House Bill 114, effective September 1, 2015, that prohibits Texas local governments from issuing CABs secured by property taxes with terms of more than 20 years and (with some exceptions) from refunding CABs to extend their maturity dates. It also limits each government's CAB debt to no more than 25 percent of its total outstanding bond debt including principal and interest. The 85th Legislature passed Senate Bill 295, which extends the allowed maturity date for CABs issued for refunding purposes and financing transportation projects.

| Table 4.1 Texas Local Government Capital Appreciation Bonds Issued in Fiscal Year 2018 | | | | | | | |
|--|-----------------------------------|----------------------|-----------------------|------------------------------|----------------------|------------------------|-----------------------------------|
| 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 |
| Public School Districts | \$10,628,192,704.55 | 16,311,704.55 | 0.15% | 94.16% | 11,622,109.30 | 41,003,241.27 | 92.46% |
| Cities, Towns & Villages | \$10,238,471,925.00 | 442,175.00 | 0.00% | 2.55% | 1,604,136.60 | 2,400,000.00 | 5.41% |
| Water Districts | \$5,150,091,750.00 | 570,000.00 | 0.01% | 3.29% | 316,749.95 | 945,000.00 | 2.13% |
| Other Special Districts | \$2,979,210,000.00 | - | 0.00% | 0.00% | - | - | 0.00% |
| Counties | \$2,205,378,099.00 | - | 0.00% | 0.00% | - | - | 0.00% |
| Comm Colleges / Junior Colleges | \$893,960,000.00 | - | 0.00% | 0.00% | - | - | 0.00% |
| Health & Hospitals | \$549,872,862.00 | - | 0.00% | 0.00% | - | - | 0.00% |
| Total | \$ 32,645,177,341 | \$ 17,323,880 | 0.05% | 100.00% | \$ 13,542,996 | \$ 44,348,241 | 100.0% |

Excludes Commercial Paper & Conduit Debt
Source: Texas Bond Review Board - Bond Finance Office

Table 4.2 shows CAB issued amounts for the last five fiscal years.

| Table 4.2 Texas Local Government Capital Appreciation Bonds Par Amount Issued by Fiscal Year (\$ in millions) | | | | | |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| | 2014 | 2015 | 2016 | 2017* | 2018 |
| Public School Districts | \$471.9 | \$214.1 | \$70.5 | \$38.1 | \$16.3 |
| Cities, Towns, Villages | - | - | 0.7 | 1.2 | 0.4 |
| Water Districts and Authorities | 1.0 | 1.8 | 2.5 | 11.6 | 0.6 |
| Other Special Districts and Authorities | - | - | - | - | - |
| Counties | 1.4 | - | - | - | - |
| Community and Junior Colleges | 1.0 | - | - | 0.0 | - |
| Health/Hospital Districts | 1.3 | - | - | - | - |
| Total CAB Par Amount Issued | \$476.7 | \$215.9 | \$73.8 | \$51.0 | \$17.3 |
| Total Par Amount Issued** | \$23,546.2 | \$38,152.2 | \$39,412.4 | \$29,941.5 | \$32,645.2 |
| CAB Par Amount % of Total | 2.02% | 0.57% | 0.19% | 0.17% | 0.05% |

* CCDs issued \$35,000 of CABs in 2017
** Includes current interest bonds, excludes commercial paper authorizations and conduit issuances.
Source: 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).

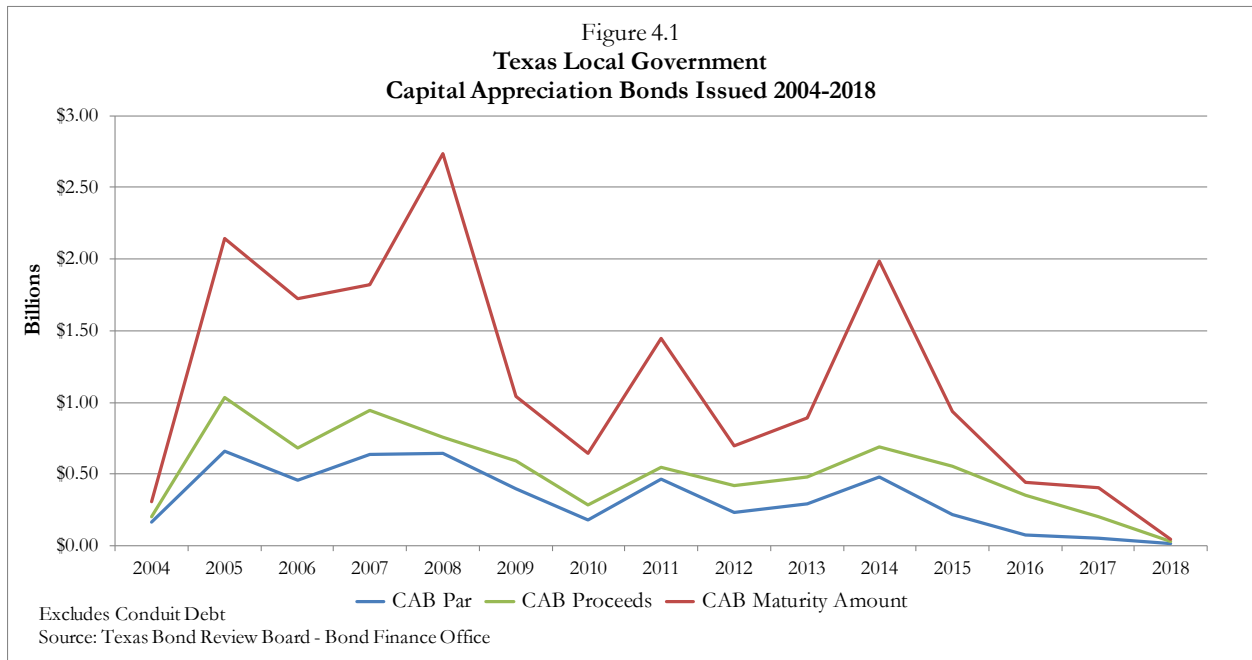
Table 4.3 lists the top 20 most expensive CABs issued and outstanding as of fiscal year-end 2018 as defined by the “Maturity Value/Proceeds” ratio. CABs become increasingly more expensive as interest continues to compound with longer term maturities. For comparison, the Maturity Value/Proceeds ratio 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 effect of including the premiums on PCABs in the comparison.

| Table 4.3 Texas Local Government Top 20 Most Expensive Capital Appreciation Bonds Outstanding As of August 31, 2018 | | | | | | |
|---|--|--------------|-------------------|--------------------|-------------------------|------------------------------------|
| Issuer | Issue | Closing Date | CAB Maturity Date | Maturity Value/Par | Maturity Value/Proceeds | Accreted Interest / Proceeds Ratio |
| Forney ISD | Unl Tax Ref Bonds Txb1 Ser 2014A | 2/18/2014 | 8/15/2053 | 12.69 | 10.87 | 10.01 |
| Forney ISD | Unl Tax Ref Bonds Ser 2014 | 2/18/2014 | 8/15/2053 | 10.17 | 8.34 | 7.52 |
| Forney ISD | Unl Tax Ref Bonds Txb1 Ser 2013B | 8/27/2013 | 8/15/2043 | 7.94 | 6.89 | 6.03 |
| Hutto ISD | Unl Tax Ref Bonds Ser 2012A | 5/3/2012 | 8/1/2045 | 249.18 | 6.71 | 6.68 |
| Anna ISD | Unl Tax School Bldg Bonds Ser 2010A | 9/21/2010 | 8/15/2046 | 3,819.06 | 6.25 | 6.25 |
| Anna ISD | Unl Tax School Bldg Bonds Ser 2011 | 6/23/2011 | 2/15/2051 | 6.17 | 5.87 | 4.92 |
| Anna ISD | Unl Tax School Bldg Bonds Ser 2010 | 4/8/2010 | 8/15/2043 | 12.00 | 5.82 | 5.33 |
| Forney ISD | Unl Tax Ref Bonds Ser 2013A | 8/27/2013 | 8/15/2043 | 9.35 | 5.49 | 4.90 |
| Lake Worth ISD | Unl Tax Ref Bonds Ser 1995 | 9/21/1995 | 2/15/2024 | 8.25 | 5.31 | 4.66 |
| Robstown ISD | Unl Tax School Bldg & Ref Bonds Ser 1994 | 1/4/1995 | 2/15/2022 | 13.16 | 5.26 | 4.86 |
| Anna ISD | Unl Tax School Bldg Bonds Ser 2009 | 10/15/2009 | 8/15/2042 | 7.57 | 5.26 | 4.56 |
| Galena Park ISD | Unl Tax School Bldg & Ref Bonds Ser 1996 | 8/20/1996 | 8/15/2031 | 6.09 | 5.11 | 4.27 |
| Crowley ISD | Unl Tax Ref & School Bldg Bonds Ser 1993 | 5/19/1993 | 8/1/2023 | 9.87 | 5.04 | 4.53 |
| Central Texas Regional Mobility Auth | Sr Lien Rev Bonds Ser 2010 | 3/11/2010 | 1/1/2040 | 5.03 | 5.03 | 4.03 |
| Hillsboro ISD | Unl Tax School Bldg & Ref Bonds Ser 2001 | 2/15/2001 | 8/15/2031 | 75.90 | 4.94 | 4.88 |
| Alvarado ISD | Unl Tax Ref Bonds Ser 1995 | 6/29/1995 | 2/15/2025 | 14.78 | 4.83 | 4.50 |
| Frisco ISD | Unl Tax School Bldg & Ref Bonds Ser 2002 | 9/24/2002 | 8/15/2034 | 11.65 | 4.79 | 4.37 |
| Crowley ISD | Unl Tax School Bldg & Ref Bonds Ser 2002 | 2/19/2002 | 8/1/2031 | 47.10 | 4.78 | 4.67 |
| Frisco ISD | Unl Tax School Bldg & Ref Bonds Ser 1999 | 8/10/1999 | 8/15/2029 | 59.78 | 4.73 | 4.65 |
| Austin | Combined Util Sys Rev Ref Bonds Ser 1994 | 10/19/1994 | 5/15/2019 | 4.61 | 4.61 | 3.61 |

Excludes commercial paper & conduit debt

Source: Texas Bond Review Board - Bond Finance Office

Figure 4.1 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 2004.



CABs Outstanding

Table 4.4 provides a comparison between the total CAB debt outstanding and total CIB and CAB debt outstanding for each type of local government entity. The CAB debt service (principal plus interest) is 2.7 percent of total debt-service owed by local governments. School districts owe the most CAB debt service at 58.5 percent of total CAB debt-service owed among all local governments. While CAB par was 1.0 percent of total CIB and CAB par outstanding at fiscal year-end 2018, CAB interest accounted for 5.9 percent of total interest owed.

| Table 4.4 Texas Local Government Capital Appreciation Bonds Outstanding as of August 31, 2018 | | | | | | | | | | | |
|---|---------------------------------|-------------------------|---------------------|--------------------------------------|-------------------------|-------------------------------|------------------------------|---------------------------------|---|--------------------------------|--|
| Entity Type | 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 |
| Public School Districts | 84,089,978,300.11 | 1,226,454,954.84 | 1.46% | 49,152,085,649.63 | 4,415,418,287.14 | 8.98% | 133,242,063,950 | 5,641,873,242 | 4.23% | 53.59% | 58.46% |
| Cities, Towns & Villages | 74,589,848,109.80 | 241,003,755.50 | 0.32% | 36,926,827,695.58 | 1,044,168,456.79 | 2.83% | 111,516,675,805 | 1,285,172,212 | 1.15% | 10.53% | 13.32% |
| Water Districts | 29,940,930,375.39 | 96,691,609.71 | 0.32% | 13,617,172,444.03 | 190,965,101.26 | 1.40% | 43,558,102,819 | 287,656,711 | 0.66% | 4.22% | 2.98% |
| Other Special Districts | 17,126,785,073.23 | 645,032,412.65 | 3.77% | 14,767,394,649.70 | 1,552,002,587.35 | 10.51% | 31,894,179,723 | 2,197,035,000 | 6.89% | 28.18% | 22.76% |
| Counties | 13,949,010,202.96 | 44,334,618.90 | 0.32% | 6,324,827,126.65 | 109,330,381.10 | 1.73% | 20,273,837,330 | 153,665,000 | 0.76% | 1.94% | 1.59% |
| Comm Colleges / Junior Colleges | \$ 5,260,949,715.00 | 23,953,715.00 | 0.46% | \$ 2,544,959,261.74 | 24,336,285.00 | 0.96% | \$ 7,805,908,977 | \$ 48,290,000 | 0.62% | 1.05% | 0.50% |
| Health & Hospitals | 3,673,321,307.04 | 11,149,366.66 | 0.30% | 2,599,112,365.11 | 26,756,617.34 | 1.03% | 6,272,433,672 | 37,905,984 | 0.60% | 0.49% | 0.39% |
| Total | \$ 228,630,823,084 | \$ 2,288,620,433 | 1.00% | \$ 125,932,379,192 | \$ 7,362,977,716 | 5.85% | \$ 354,563,202,276 | \$ 9,651,598,149 | 2.72% | 100.00% | 100.00% |

Excludes Commercial Paper, Conduit Debt & Build America Bond subsidies.
Source: Texas Bond Review Board - Bond Finance Office

Figure 4.2 below shows the maturity amount (principal plus interest) for each local government entity with CABs outstanding since 2004.

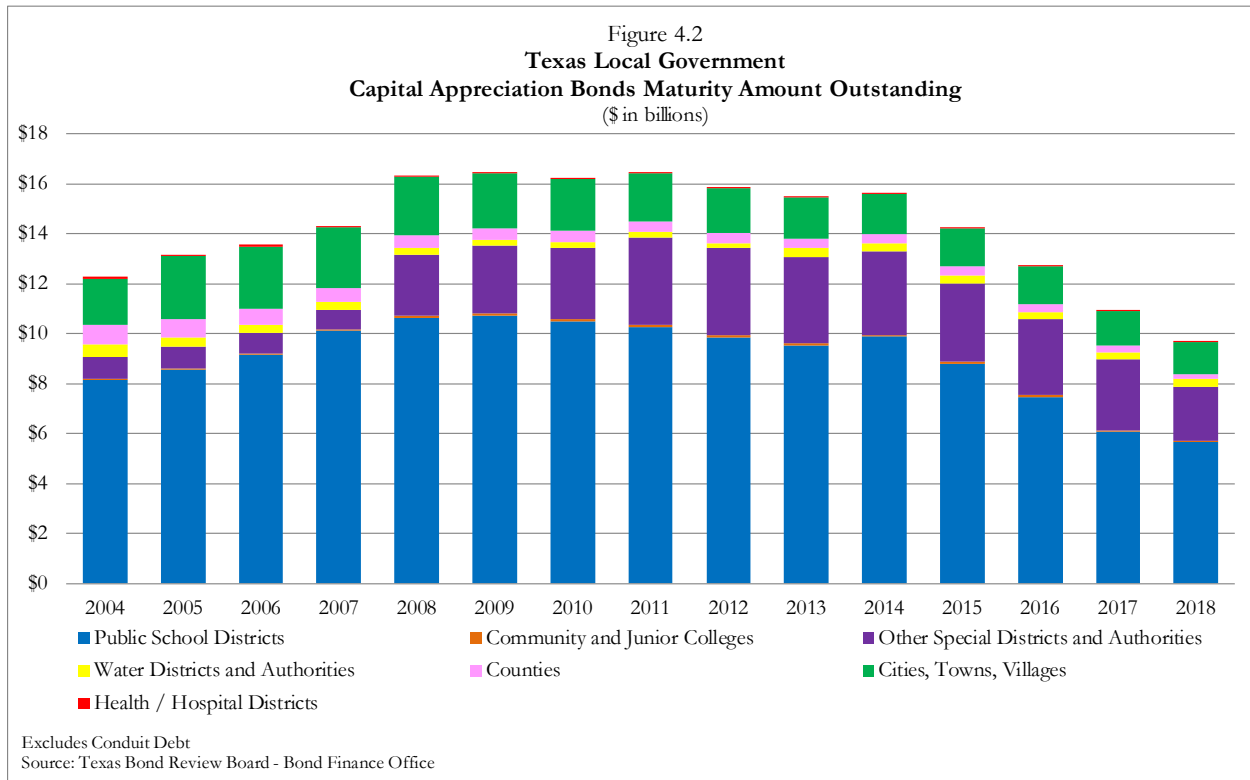


Figure 4.3 shows CIB debt service and CAB debt service for all local governments since 2004. In fiscal year 2018, CAB maturity amounts accounted for 2.7 percent (\$9.65 billion) of the total debt service outstanding.

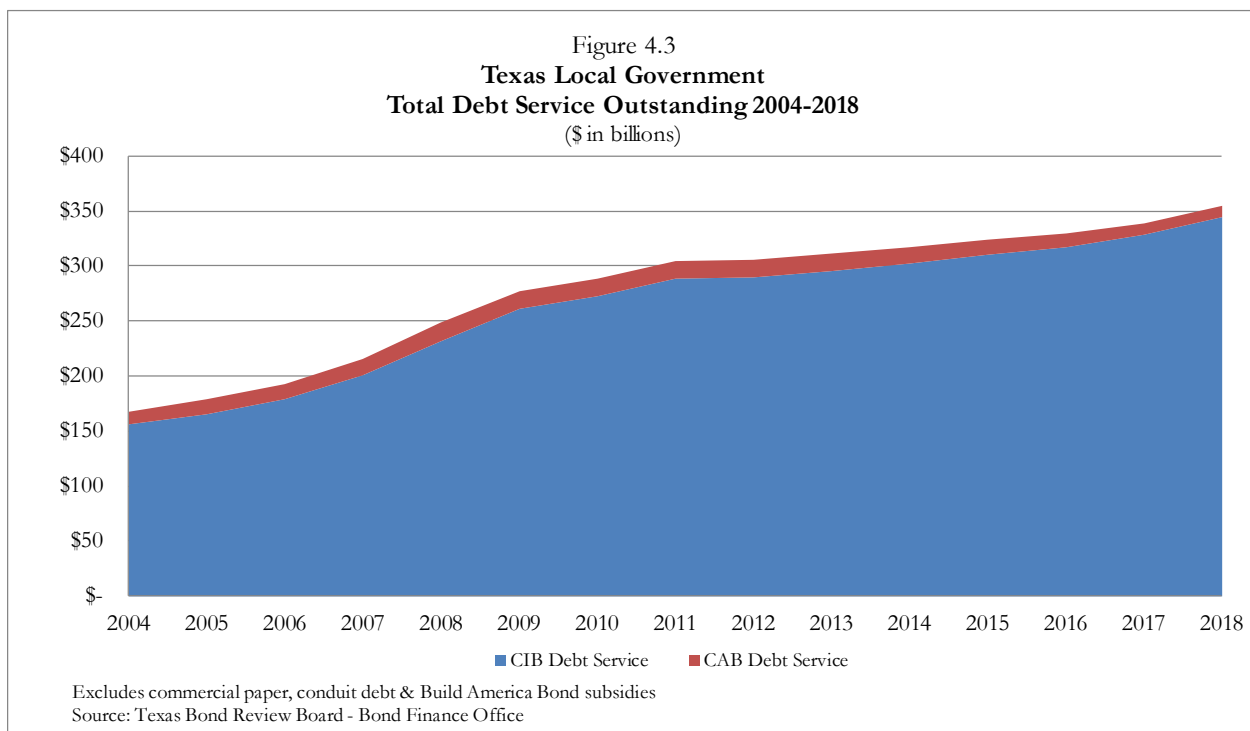


Figure 4.4 compares the ratio of total debt service to total par outstanding for CIB and CAB debt for all local governments. On average, issuers of CAB debt paid \$3.56 in principal and interest for every \$1 of principal borrowed since 2004 compared to \$1.64 for CIB debt.

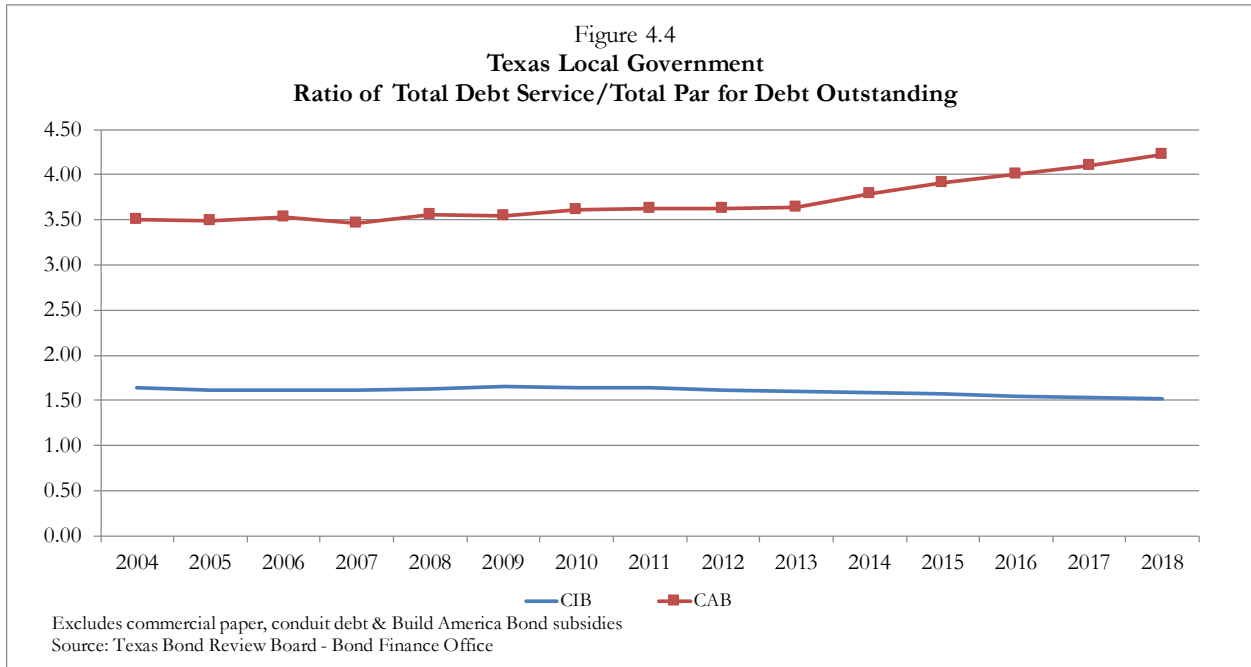


Figure 4.5 compares the ratio of public school district (ISD) debt service to ISD debt outstanding for CIB and CAB debt. On average, school districts paid \$3.74 in principal and interest for every \$1 of principal borrowed since 2004 for CAB debt compared to \$1.60 for CIB debt.

