Effect of Long Term Debt on the Financial Condition of the State

November 1997

Department of Legislative Services
Office of Policy Analysis

Annapolis, Maryland

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DEPARTMENT OF LEGISLATIVE SERVICES
OFFICE OF POLICY ANALYSIS
MARYLAND GENERAL ASSEMBLY

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November 18, 1997

The Honorable Barbara A. Hoffman, Co-Chairman
Spending Affordability Committee

The Honorable Nancy K. Kopp, Co-Chairman
Spending Affordability Committee

Dear Senator Hoffman and Delegate Kopp:

The Department of Legislative Services's annual report on the "Effect of Long Term Debt on the Financial Condition of the State" is presented. This report essentially follows the format of previous reports and includes a review of the recommendations of the Capital Debt Affordability Committee, an independent affordability analysis, and a market analysis.

The creation of the Capital Debt Affordability Committee complements the efforts of the Spending Affordability Committee in management of the State's bonded indebtedness. The Capital Debt Affordability Committee, created by an Act of the 1978 General Assembly, is required to submit a recommended level of debt authorization to the Governor and the General Assembly by September 10 of each year. The existence of the committee within the executive branch means that consideration of debt affordability will occur at the time of formulation of the State's capital program, as well as at the time of approval of the program by the legislature.

The statistical analysis and data used in developing the recommendations were prepared by Steve McCulloch with assistance by Mary Bewig, Patrick Frank, Benjamin Birge, and Theresa Tuszynski. The manuscript was prepared by Jo Ann Bryan.

Respectfully submitted,

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Chapter 1. Recommendations of the Department of Legislative Services

New Debt Authorization

The Capital Debt Affordability Committee's recommended debt limit of $430 million in new general obligation debt authorization is an increase of $15 million over the recommended debt limit for fiscal 1998. This increase of 3.6% is generally consistent with the long range plan adopted by the committee in 1992 to increase the general obligation debt limit by 3% each year based on 1% growth and 2% inflation. This pattern of increase, recommended by the Department of Fiscal Services in its 1991 report, has been more reflective of the actual rate of inflation during recent years than the 4% the committee had been using prior to 1992.

In accordance with Section 8-113 of the State Finance and Procurement Article the Governor notified the General Assembly by letter dated October 15, 1997 on the level of State debt that is advisable. The Governor accepted the recommendation of the Capital Debt Affordability Committee and provided the following preliminary allocation of the $430 million debt authorization:

	G.O. Debt
State Owned Facilities	$160,000,000
Grant & Loan Programs	148,000,000
Public School Construction	122,000,000*
TOTAL	$430,000,000

*The Governor also proposed $19 million in Paygo capital for school construction

Agency requests for fiscal 1999 total $542.5 million, 26% more than the amount available under the Debt Affordability limit.

Forecasts of personal income and levels of outstanding debt indicate that Maryland's debt capacity will grow, making the five-year general obligation debt authorization plan affordable according to the debt affordability criteria. **The Department of Legislative Services agrees with the committee's recommended debt limit for the 1998 Session of $430 million in general obligation bonds.**

Authorization of Transportation Debt

Transportation debt has a more immediate impact on outstanding debt as it is authorized to fund the cash flow in the Consolidated Transportation Program (CTP). Issuance of transportation bonds is dictated by the magnitude of the CTP and available revenues, but is also limited by a ceiling on the maximum debt outstanding and a debt service coverage requirement. **It is recommended that the General Assembly continue to set an annual limit on the level of State transportation debt in order to remain within the 3.2% criterion.**

Higher Education Debt

In fiscal 1999 the University System of Maryland intends to issue $24 million in academic debt and $36 million in auxiliary debt. Based on these projections, debt service is expected to equal 4.42% of unrestricted current fund expenditures and mandatory transfers. The system's financial advisers have recommended an upper limit of 5.5%. **It is recommended that no more than $30 million in academic revenue projects be authorized for fiscal 1999. It is further recommend that the cap remain at $647 million. The University of Maryland System has sufficient capacity within the existing cap for the planned issuances.**

Revenue Bonds

The 1989 executive order establishing a cap on State agency debt remains in effect. A proposal to revise the executive order has been forwarded to the Governor for his review. Since problems experienced by any Maryland issuer can negatively affect other Maryland bond issues, it is important that meaningful oversight of agency debt be maintained. **It is recommended that agency debt practices continue to be monitored. Should the Governor rescind the executive order relating to agency debt the General Assembly may wish to consider legislation which would establish controls on the amount of agency debt that can be issued each year.**

Chapter 2. Recommendations of the Capital Debt Affordability Committee

New Debt Authorization

- Limit new debt authorization at the 1998 session to $430 million. This figure is $15 million more than the prior year's recommendation.

- The long range plan adopted by the Capital Debt Affordability Committee includes annual increases in recommended debt levels of $15 million per year representing increases ranging from 3.6% in fiscal 1999 down to 3.05% in fiscal 2004. The planned increases are based on providing approximately 2% to cover inflation and 1% real growth in the capital plan. The following table presents the new long range plan:

Session	Debt Limit ($ in millions)
1998	$430
1999	445
2000	460
2001	475
2002	490
2003	505

Higher Education Academic Debt to be Authorized

Limit new debt authorization for academic facilities to $30 million for the next fiscal year. The Capital Debt Affordability Committee notes the proposed capital financing programs for the four systems result in a debt burden level generally below last year's level. The entire amount is planned for academic facilities at the University of Maryland.

Chapter 3. Review of the Analysis of the Capital Debt Affordability Committee

The Capital Debt Affordability Committee continues to employ two affordability criteria established in 1979 after analysis of available data including information from rating agencies. (These criteria were reassessed in 1984 and 1988 and found to be valid measures consistent with good management of debt over time.) The affordability criteria are:

- total State tax supported outstanding debt should not exceed 3.2% of Maryland personal income; and

- total State tax supported debt service payments should not exceed 8% of State tax revenues.

While the committee expanded its focus in 1987 to include all types of State tax supported debt (i.e., transportation, the Maryland Stadium Authority, Bond Anticipation Notes and capital leases), the fiscal 1999 debt limit of $430 million applies only to general obligation debt. In 1989 the committee further broadened its review to include higher education academic revenue bonds. Although by law the committee must review the size and condition of this revenue debt, the $30 million recommended debt limit for academic facilities is in addition to the limit on general obligation debt and is not considered as tax supported debt nor is it subject to the 3.2% affordability standard.

The projections of the Capital Debt Affordability Committee indicate that total State tax supported debt outstanding will remain within the 3.2% of Maryland personal income limit for the five year forecast period. The committee's projections indicate that debt outstanding will reach 3.1% of Maryland personal income in fiscal 1999 and decline over the following four years to 2.5% in fiscal 2003.

Risk Analysis

As in prior years, the committee performed a risk analysis to evaluate the potential for exceeding the affordability criteria under a proposed five-year general obligation bond authorization plan. The four basic risk factors which the committee considered were:

1. changes in personal income;

2. changes in the definition of tax supported debt;

3. changes within the general obligation bond program; and

4. changes in the bond issuance plans for other components, including new components of tax supported debt.

Changes in after-the-fact measurement of personal income, as compared to estimates in growth in personal income, are obviously beyond the committee's control. Using a conservative approach in projecting growth in personal income has resulted in subsequent revisions generally indicating additional debt capacity. The committee's projections of the levels of personal income are higher than in last year's report due primarily to a higher base in 1995. The committee's report projects growth from 1996 to 2001 at an annual rate of 4.8% which is the same as last year's projected growth rate. The committee felt that there remains risk associated with reductions in the anticipated level of personal income but that even a growth rate of only 4.4% for fiscal years 1997 through 1999 would raise the debt ratio only four hundredths of one percent by fiscal 1999. The committee notes that only once during the last 25 years, during the period 1991 - 1993, was the growth in personal income less than 4.4%.

According to the committee, internal changes in the definition of what constitutes State tax supported debt resulting from reviews of individual transactions would tend to be minor. However, changes in definition by the bond rating agencies or the Governmental Accounting Standards Board could have a major impact on measured affordability. The committee is unaware of any potential external changes and believes that any external changes would provide ample lead time to allow adjustments to the five-year plan.

Changes within the general obligation bond program were thought most likely to consist of two types. First, changes might occur to the types or costs of certain capital projects. However, since the committee recommends a specific dollar amount and not the use of the funds, this type of change would not affect affordability so long as the total dollar amount is not exceeded. Second, changes might occur in the rate at which authorized bonds are issued. The committee assumes a six-year time period for total issuance of a bond authorization. Any systematic factors that change the rate with which bonds are sold, would affect the ratio of debt outstanding to personal income. To reflect actual issuance rates experienced in recent years, the committee in it's fiscal 1998 report revised upward from 25% to 31% the assumed percentage of general obligation bonds issued within the first year of authorization. The current report continues the assumption that 31% of bonds authorized in a given year will be issued in the following year.

Changes in issuance plans for the transportation program, capital leases, the Stadium Authority or any unknown component of State tax supported debt have the potential to affect affordability. The committee identified several factors that might result in changes in issuance plans such as external factors that accelerate or delay a project, the expansion of existing programs or the starting of new ones that have not been accounted for in the analysis, and unknown changes in bond programs that would be considered State tax supported debt. These types of changes could have a positive or negative impact on the affordability of the five year capital program.

The committee's risk analysis considers changes in the growth of personal income to be the greatest risk factor with potential changes to the issuance plans of other components of State tax supported debt posing a lesser risk. The committee believes these risks to have a low probability of causing a breach of the affordability criteria limits.

Chapter 4. State Tax Supported Debt

Maryland issues five types of tax supported debt:

1. General obligation bonds backed by the full faith and credit of the State;

2. Revenue bonds and notes issued by the Department of Transportation backed by operating revenues and pledged taxes of the department;

3. Capital leases, annual payments of which are subject to appropriation by the General Assembly;

4. Revenue bonds issued by the Maryland Stadium Authority and secured by a lease with the State; and

5. Tax or bond anticipation notes (TANs/BANs) which may be issued by the Treasurer and which must be repaid within 180 days of issuance.

General Obligation Bonds

General obligation bonds are authorized and issued to pay for the construction, renovation or equipping of facilities for State, local government and private sector entities. Grants and loans are made to local governments and private sector entities when a State need or interest has been identified. Projects funded with general obligation bonds include public and private colleges and universities, public schools and community colleges, prisons and detention centers, hospitals, low-income housing, and economic development projects.

Capital Budget Requests for Fiscal 1999 to 2003

Agency requests for fiscal 1999 total \$542.5 million, over 26% more than the amount available under the debt affordability limit. Capital requests for the next five years total over \$3.0 billion, while the projected debt limit for the same period totals \$2.3 billion. These figures demonstrate that the number of capital projects proposed far exceeds the ability of the State to appropriate bond funds to provide for capital needs. **Exhibit 4.1** provides a listing of general obligation bond capital requests over the next five years.

Exhibit 4.1
GO Bond Requests: FY 1999 - 2003
($ in millions)

	Fiscal Year						Category
	1999	2000	2001	2002	2003	Total	Totals
State Facilities							$350.2
Board of Public Works	$42.4	$109.1	$65.8	$82.2	$35.3	$334.7	
Military	7.4	1.0	0.0	0.0	0.0	8.5	
Veterans	0.1	0.4	3.0	3.3	0.2	7.0	
Health & Social Services							237.4
Health & Mental Hygiene	22.6	7.0	24.6	13.6	16.6	84.4	
Comm. Mental Hlth. Facil.	5.7	6.5	6.5	6.5	6.5	31.7	
Senior Citizen Activity Ctr.	0.7	1.0	1.0	1.0	1.0	4.7	
Juvenile Justice	44.2	26.3	7.4	25.1	9.8	112.8	
Juvenile Resid. Facil. (grant)	1.4	0.6	0.6	0.6	0.6	3.8	
Environment							258.3
Natural Resources	10.5	15.0	25.0	35.0	35.0	120.5	
Agriculture	6.9	4.8	4.9	5.0	5.1	26.7	
Environment	20.5	20.2	20.2	18.2	16.2	95.4	
Md. Environmental Service	3.2	3.5	2.9	3.0	3.0	15.6	
Education							663.1
Education	2.3	13.4	5.9	15.2	16.3	53.1	
Public Sch. Construction[1]	122.0	122.0	122.0	122.0	122.0	610.0	
Higher Education							896.9
Univ. System of Maryland[2]	105.0	100.6	101.5	105.4	101.1	513.8	
Univ. of Md Medical System	12.0	12.0	11.0	11.0	9.0	55.0	
Balt. City Comm. College	1.2	14.4	7.4	17.6	5.4	46.0	
St. Mary's College	8.1	2.3	0.0	16.9	1.2	28.6	
Morgan State University	12.0	16.6	11.1	44.8	40.3	124.7	
Community Colleges	17.0	37.0	26.6	33.7	14.7	128.9	
Public Safety							226.5
Public Safety	23.3	50.1	35.8	48.1	32.1	189.4	
State Police	6.6	18.5	5.9	6.1	0.0	37.1	
Housing & Economic Development							83.2
Economic Development	4.2	2.7	0.0	0.0	0.0	6.9	
Housing & Comm. Devel.	3.6	3.8	7.2	4.2	4.0	22.8	
Partnership Rental Housing	13.2	13.2	13.2	7.0	7.0	53.5	
Legislative Initiatives	12.5	12.5	12.5	12.5	12.5	62.5	62.5
Miscellaneous							222.8
Miscellaneous	33.8	58.5	41.7	76.6	12.2	222.8	
Total Request	$542.5	$673.1	$563.5	$714.7	$507.2	$3,000.9	$3,000.9
Debt Affordability Limits	$430.0	$445.0	$460.0	$475.0	$490.0	$2,300.0	

[1]Represents IAC request. Requests from the counties typically exceed the amount included in the IAC request, however, the county request amounts were unavailable at time of printing.
[2]The USM requested GO bond funding of its entire non-auxiliary capital program. This is a departure from past years in which the system's request included plans to issue academic revenue bonds. The FY98 Capital Improvement Plan anticipates $30 million in academic revenue bond funding for system projects in FY99 and $25 million per year thereafter.

Source: Department of Budget and Management

This listing reflects agency requests and will differ from the list that will appear in the Governor's fiscal 1999 *5-Year Capital Improvement Plan* (CIP). Figures for public school construction funding represents the request of the Interagency Committee on School Construction (IAC). Requests from the counties to the IAC typically exceed the request forwarded by the IAC to the Department of Budget and Management.

Bond Issuance Stream

General obligation bonds authorized in a given year are not issued in total the following year. In fact, the Treasurer reports that just over half of the general obligation bonds authorized in a year are typically issued within the next two fiscal years. This delay in issuance results in a substantial lag between the time general obligation debt is authorized and when it has a significant impact in debt outstanding levels.

The bond issuance stream is the key table upon which much of the affordability calculations are based. This table, included as **Appendix 1**, shows how the proposed authorizations for fiscal years 1998 through 2007 would be issued. For the six years prior to its 1996 report, the Capital Debt Affordability Committee (CDAC) assumed 100% issuance of authorized bonds over a six-year period (25%, 25%, 20%, 20%, 5% and 5%). In its 1996 report, however, the CDAC assumed bonds authorized in a given year would be fully issued in just five years (31%, 25%, 20%, 15% and 9%). This change was made in response to an increase in the rate of issuances experienced from 1994 to 1996. This increase in the rate of issuances means that new authorizations will impact Maryland's level of outstanding debt, and Maryland's debt affordability capacity, more quickly than in the past. The current report continues the new five year issuance assumption. **It is recommended that the Capital Debt Affordability Committee continue to monitor the rate at which new authorizations are issued and make appropriate adjustments to the issuance assumptions in the future as necessary.**

The table in Appendix 1 also indicates the expected issuances of current authorizations. There is, and has been since 1989, over $1 billion in authorized but unissued debt. The CDAC report assumes that $342 million and $205 million of this debt will be issued in fiscal 1999 and 2000, respectively.

In the past the committee offset the amount of general obligation bonds authorized by $10 million, assuming that this amount would represent a potential lease conversion project for which general obligation bonds had been authorized. This practice had the effect of placing $10 million into the issuance stream immediately rather than spreading it over the six year period. Beginning with the 1991 report, the committee assumed there would be no offset in the amount of general obligation bonds issued. Therefore, it placed the full authorization into the six year issuance stream and showed the amount of capital leases anticipated in a separate column outside of the general obligation debt column. In addition, the committee now anticipates capital leases for equipment as well as energy conservation projects. These changes were made to recognize that these capital leases were not replacing general obligation authorizations but were being done in addition to the authorizations.

Bond Refunding

The bond sales of May and October 1993 and February 1994 included the refinancing of prior bonds. The May 1993 bond sale included $147.7 million in refunding principal which was placed into escrow to refund $130.5 million in prior bonds. Over the term of the bonds this will result in debt service savings of $5.55 million.

Exhibit 4.2
Fiscal Year Savings as a Result of Refinancing

Fiscal Year	May 1993	October 1993	February 1994	Total
1993	$ 40,024	$ 0	$ 0	$42,024
1994	917,879	2,669,723	783,295	4,370,987
1995	910,776	492,895	310,473	1,714,144
1996	333,201	472,095	312,665	1,117,961
1997	332,226	470,765	310,828	1,113,819
1998	334,401	470,635	310,215	1,115,251
1999	335,289	471,278	312,380	1,118,947
2000	334,551	468,230	310,145	1,112,926
2001	334,817	470,965	308,260	1,114,042
2002	333,826	467,865	311,667	1,113,358
2003	332,193	467,660	312,837	1,112,690
2004	333,840	470,640	0	804,480
2005	333,748	467,448	0	801,196
2006	333,460	468,463	0	801,923
2007	0	471,213	0	471,213
TOTAL	$ 5,540,231	$ 8,799,875	$ 3,582,765	$17,922,871

Similarly, the October 1993 bond sale included $143.1 million in refunding principal which was placed into escrow to refund $123.4 million in prior bonds. The gross saving on this refinancing will be $8.8 million. Finally, the February 1994 bond sale included $64.2 million in refunding principal to refund $56.7 million in prior bonds. The debt service savings will be $3.6 million. The annual savings from the three refundings each fiscal year will result in a reduction in the general fund appropriation required in the operating budget under the Annuity Bond Fund to pay debt services on general obligation bonds. Savings per fiscal year is included in **Exhibit 4.2**.

Interest rates have risen since 1993 making additional refundings unlikely in the near future. However, should interest rates fall again to a point where it is determined that there would be sufficient savings to warrant a refunding, such action would be presented to the Board of Public Works for its approval.

New General Obligation Bond Authorizations

The CDAC recommends that new authorizations of general obligation bonds during the 1998 legislative session be limited to $430 million. This recommendation is consistent with the six year plan included in CDAC's 1996 report and represents a $15 million increase over the amount authorized by the General Assembly in the 1997 session. CDAC's six year forecast of general obligation bond authorization levels continues the $15 million annual increase that has been projected for the past few years. The projected increases remain slightly in excess of the 3% increase target comprised of a 2% increase each year to account for inflation and 1% increase representing real growth in the State's general obligation capital program. The authorizations and percent increases projected by the committee are as follows:

Session	General Obligation Bond Authorizations ($ in millions)	Increase
1998	$430	3.6%
1999	445	3.5%
2000	460	3.4%
2001	475	3.3%
2002	490	3.2%
2003	505	3.1%

Transportation Bonds

The Maryland Department of Transportation (MDOT) issues 15-year consolidated transportation bonds which are tax supported debt. Bond proceeds are usually earmarked for highway construction. Revenues from taxes and fees and other funding sources accrue to the transportation trust fund to pay debt service and operating budget requirements, and to support the capital program. Debt service on consolidated transportation bonds is payable solely from the trust fund.

The department previously issued county transportation bonds which were considered both State and county debt and counted toward State debt affordability limits. Chapter 539 of the Acts of 1993 altered this policy by authorizing the department to continue to issue bonds on behalf of the local jurisdictions, without having the local debt apply to State debt affordability limits. Currently this debt counts only toward the debt outstanding of the counties.

Consolidated Transportation Bonds

The issuance of transportation debt is limited by two criteria: an outstanding debt limit and a coverage test. The outstanding debt limit is set by statute. During the 1992 session the outstanding debt limit was increased from $950 million to $1.2 billion with the proviso that an annual debt ceiling is to be set annually in the budget bill. The fiscal 1998 budget bill set the maximum ceiling for June 30, 1998 at $1.074 billion, with an allowance to increase the debt outstanding by another $15 million provided such an increase is justified to the budget committees prior to the publication of a preliminary official statement.

The bond revenue coverage test, established in the department's bond resolutions, mandates that net revenues and pledged taxes must each equal at least twice (2.0) the maximum future debt service. The department has adopted an administrative policy establishing a minimum coverage of 2.5. As of June 30, 1998, MDOT will have a maximum outstanding debt of $982 million with coverage estimated at 3.5 times maximum debt service under the net revenue test, and 5.6 times using the pledged tax test.

The department has issued consolidated transportation bonds in 9 of the last 10 years. In 1993, $504 million in bonds was issued to refinance prior year debt. The department sold $50 million in bonds in calendar 1996. A sale of $140 million is planned in early 1998.

Exhibit 4.3 shows that the department issued significant levels of debt in the late 1980s and early 1990s. Between calendar 1989 - 1992 MDOT issued $865 million in new debt. In contrast $240 million in debt was issued between calendar 1993 - 1997.

Exhibit 4.3
Consolidated Transportation Bond Issuance *

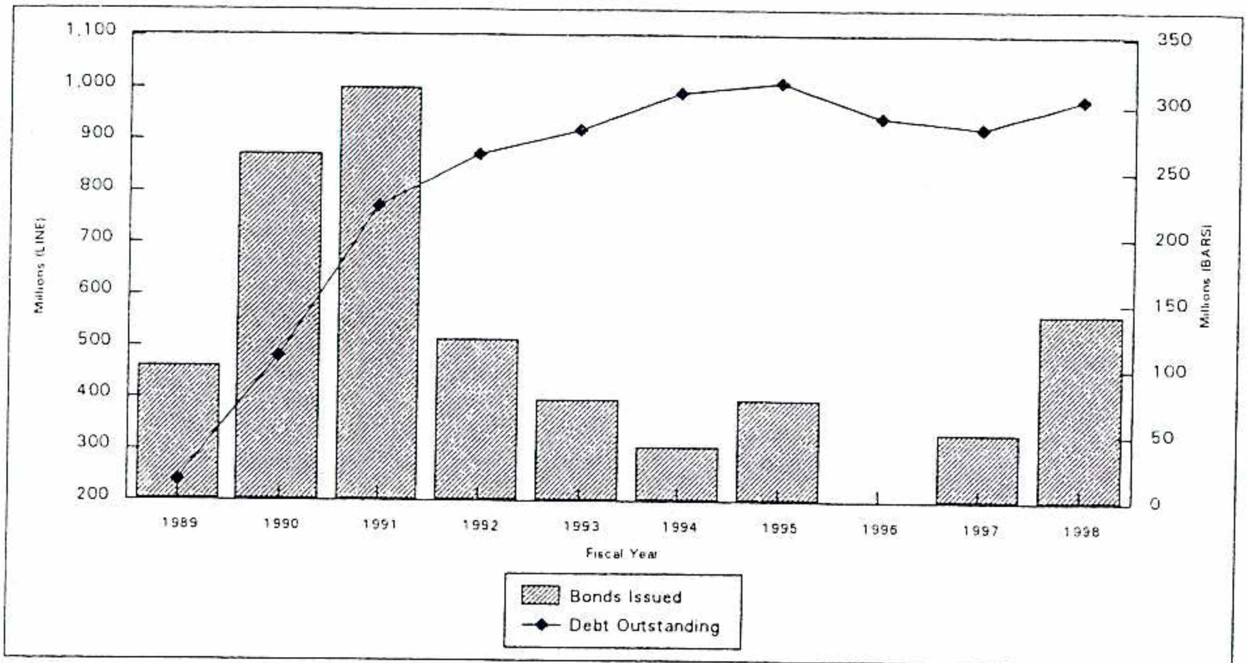
	Series	Amount
	1989	260,000,000
	1990	310,000,000
	1991	120,000,000
	1992	75,000,000
	1993	40,000,000
	1994	75,000,000
	1996	50,000,000
TOTAL		$930,000,000

* Exclusive of refinancing

Source: Department of Transportation
Prepared by: Department of Legislative Services, November 1997

As a result of the additional bonds issued, the department's net debt outstanding has grown from $168 million in fiscal 1988 to $982 million in fiscal 1998. **Exhibit 4.4** illustrates annual bond sales and the increase in debt outstanding.

Exhibit 4.4
MDOT Bonds Issued and Net Debt Outstanding
Ten Year Summary - Fiscal 1988 - Fiscal 1997
($ in millions)



Source: Department of Transportation
Prepared by: Department of Legislative Services, November 1997

Future Debt Issuance

In September 1997 the Capital Debt Affordability Committee (CDAC) issued its report, which included a proposed bond issuance stream for transportation debt through fiscal 2003. The proposed level of debt to be issued for fiscal 1998 - 2003 totaled $390 million as outlined in **Exhibit 4.5**. No debt would be issued beyond fiscal 2000 due to insufficient revenues to meet the 2.0 coverage test. Debt outstanding would peak at $1.048 billion in fiscal 1999.

Exhibit 4.5
MDOT Projected New Debt Issuance
($ in millions)

Fiscal Year	Projected Debt Issuance
1998	$140
1999	160
2000	90
Total	$390

Source: *Report of the Capital Debt Affordability Committee on Recommended Debt Authorizations*, September 1997

Prepared by: Department of Legislative Services

Debt Service

Prior to fiscal 1990, the department maintained a debt service reserve whereby two years of principal and interest payments were set aside in a reserve account upon the issuance of bonds. This debt service was then used for the repayment of those bonds. This requirement was eliminated by Chapter 255 of the Acts of 1989 for bonds sold after June 1, 1989. The department currently budgets annual debt service payments in the year that principal and interest is due. The refinancing of prior year debt retired all but two of the bond series issued prior to 1989 which had sinking fund reserve requirements. Final sinking fund deposits for the 1986 and 1988 Series bonds were made in fiscal 1996 and were reflected in the level of net outstanding debt in fiscal 1997.

As a result of the large issuances of debt during the late 1980's, annual debt service requirements have risen 317% since fiscal 1989, from $35 million to $146 million in fiscal 1998. Annual debt service will continue to increase as the debt is repaid, with annual payments expected to exceed $151 million by fiscal 2000.

Future Direction of the State Transportation Capital Program

Declines in capital spending occur over time because transportation revenues (which are not inflation sensitive) do not grow as quickly as expenditures. The department budgets for debt service, operating budget requirements, and capital system preservation needs first, followed by spending for new or ongoing capital projects.

Thus as expenditure needs grow, progressively lower levels of funding remain for capital spending.

The draft 1998 transportation capital program proposes a funding level of approximately $700 million or higher through fiscal 2000. The program would fall below $600 million beginning with fiscal 2001, of which more than half would be for system preservation projects.

The initiation of major new capital projects requires the department to seek revenue enhancements periodically. Increases in fuel taxes and related fees were last enacted at the 1987 and 1992 sessions. The timing of a future revenue increase will be dependent on an assessment of State transportation needs as well as the desired magnitude of the transportation capital program.

County Transportation Bonds

Prior to 1993 MDOT issued debt on behalf of the counties and Baltimore City for local projects. These bonds received AA ratings, which were generally more favorable than the rates received on most county bond issues. County transportation bonds were considered debt of both the counties and the State.

Chapter 539 of the Acts of 1993 authorized MDOT to issue bonds for the local jurisdictions which no longer count against State debt affordability limits, but instead count only toward the debt outstanding of the counties. MDOT continues to be responsible for all aspects of administering and issuing debt for the counties. The department charges the counties an administrative fee for servicing the bond issues. Debt service on the bonds was, and will continue to be paid, from the local share of transportation revenues.

In November 1993 MDOT refunded nine series of previously issued county debt. There are two remaining series of county debt which were not refunded, and therefore will continue to count against State debt affordability limits until the issues are retired. As of June 30, 1997, the remaining net principal balance on the 1986 Refunding and 14th Series bonds totaled $11 million. The issues will be retired in fiscal 2007.

Conclusions and Recommendations on Transportation Debt

The MDOT competes with other State capital projects within debt affordability limits. Transportation debt capacity is limited by the constraints on debt outstanding, debt service coverage, the cash flow needs for projects in the capital program, and overall State debt affordability limits. **It is recommended that the General Assembly**

continue to set an annual limit on the level of State transportation debt in order to remain within the 3.2% of personal income debt affordability criterion.

Capital Leases

Beginning in 1987, the State's capital program began utilizing lease/leaseback financing for capital projects. These leases are used to acquire both real property and equipment. Beginning in fiscal 1994 the State instituted a program involving equipment leases for energy conservation projects at State facilities. For real property, the transaction generally involves an agreement in which the State leases property to a developer who in turn builds, or renovates a facility and leases it back to the State. At the end of the lease period ownership of the facility is transferred to the State. Equipment leases are generally for shorter periods of time, from three to five years. For energy conservation projects, agencies make lease payments using the savings that result from implementation of the conservation projects.

All three types of leases, equipment, energy conservation, and property, have advantages. Often, equipment leases involve high technology equipment, such as data processing equipment or telecommunications equipment. Equipment leases offer the State more flexibility than purchases since leases can be for less than the entire economic life of the equipment. Equipment leases are especially attractive in an environment where technology is changing very rapidly. Leases can also be written with a cancellation clause which would allow the State to cancel the lease if the equipment were no longer needed. Currently the Treasurer's lease-purchase program consolidates the State's equipment leases in order to lower the cost by reducing the interest rate on the lease. The rate the Treasurer receives for the State's $25 million in equipment leases is less than the rates individual agencies would receive if they financed the equipment leases themselves.

Using the savings realized in utility cost reductions to pay off energy conservation project leases allows projects to proceed that otherwise might not be of high enough priority to be funded given all of the other competing capital needs statewide. Under the program, utility costs will decrease and as the leases are paid off the savings from these projects will accrue to the State.

The primary advantages of property leases when compared to general obligation bonds are that they allow the State to act more quickly if an unanticipated opportunity presents itself. Because of the extensive planning and legislative approval process involved in the State's construction program it often takes years to finance a project. Lease agreements are approved by the Board of Public Works after they have been reviewed by the budget committees. Since the Board of Public Works and the budget committees meet throughout the year, leases can be approved much more quickly than general obligation bonds, which must be approved by the entire General Assembly during a legislative session. Therefore, property leases give the State the flexibility to take advantage of economical projects which are unplanned and unexpected.

Several large lease/leaseback projects undertaken in the past have been initiated at institutions of higher education. These projects, all part of the University System of Maryland, use student fees to secure the debt. These are projects financed through auxiliary funds rather then general obligation bonds and are not included as tax supported debt by the Capital Debt Affordability Committee.

The first tax supported capital leases were made by the Motor Vehicle Administration which began a program of construction of branch offices financed through lease/leaseback. Five offices were financed through this mechanism before the 1988 General Assembly recommended that the Motor Vehicle Administration resort to the Transportation Trust Fund as its means of financing future branch offices. Several of these projects were refinanced in 1993 at a lower interest rate.

Capital leases were also used to finance the construction of multi-service centers in St. Mary's and Calvert counties. Bonds totaling $9.3 million covered by the St. Mary's lease were authorized in the 1987 session and bonds covered by the capital lease in Calvert County were authorized in the 1987 and 1990 sessions for a total of $8.5 million. During 1992, the State Highway Administration financed a headquarters facility through certificates of participation secured by an installment purchase agreement between the State and the financing institution. It also financed a State Highway Administration traffic complex facility. These actions took place outside of the legislative process, but are included as tax-supported debt.

In October 1992, the Board of Public Works after receiving support from the budget committees signed an agreement with Baltimore County to lease/purchase a new district court in Towson. This project was built by the county on county owned land with county financing. If the State does not exercise its option to buy the court facility prior to the completion of the lease agreement period, the State will pay the county annual rent for 15 years. At that time the State will assume ownership of the facility and land.

At the request of the Department of General Services, the Board of Public Works approved an agreement with Prince George's County to lease/purchase the Hyattsville District Court. This project was a fast track, design/build construction project under management by General Services and was built on State owned land using county financing. The State will pay the county annual rent for 15 years unless the State purchases it outright prior to the end of the lease agreement.

In August 1994, General Services requested and received permission from the budget committees to enter into a lease with the Maryland Economic Development Corporation for a building to house the Department of Human Resources' Baltimore

City Social Services office. At the end of the 15 year lease the State will own the building and will have the option of collecting rent from an existing tenant or occupying the entire building.

The original method of accounting for lease purchases of real property within the debt affordability context has changed since the mid 1980's. As originally envisioned, $10 million a year in lease purchases was included in the debt affordability calculations to recognize the possibility of a "good deal" arising when the legislature was not in session. The Capital Debt Affordability Committee assumed that the lease purchases would replace projects approved under the general obligation debt limit. Therefore, of the general obligation bonds authorized for issuance in any given year $10 million would remain unissued, (replaced by lease agreements,) and would be subject to cancellation. Beginning with its 1991 report however, the committee's assumption has been that there will be $10 million in real property capital leases <u>in addition to</u> the general obligation bonds authorized each year, and the committee's estimates have projected the issuance of the full general obligation bond authorization each year.

In 1987 the Joint Budget and Audit Committee opposed a separate limit for capital leases which removed certain projects from the competition for funding under the general obligation bond limit. As previously noted, the original reason for establishing a separate $10 million for capital leases was to handle unanticipated lease/lease back projects. The present use of lease/leaseback creates a system diametrically opposed to the committees 1987 recommendations.

During the 1993 interim, in discussions on the Hyattsville District Court, the authority of the General Assembly to review capital leases was questioned. The Department of Fiscal Services requested the Attorney General's Office to review the procedure by which the budget committees have 45 days to review and comment on proposed capital leases. Advice of counsel indicated that there was no clear requirement for such review process. As a result, the Joint Budget and Audit Committee sponsored legislation during the 1994 session to codify procedures regarding capital leases. This legislation (HB 1282/SB 564) was enacted as Chapter 654 of the Acts of 1994.

It should be noted that while capital lease programs are considered part of State supported debt, they are not included under the general obligation debt limit and therefore, increase the State's capital program to the extent that projects are approved by the Board of Public Works. The Capital Debt Affordability Committee generally includes $10 million annually for real property leases, $15 million annually for equipment, and $10 million annually for energy projects. Due to slow growth in personal income during the early 1990's it appeared during the fall of 1996 that the State was in danger of breaching the 3.2% of personal income affordability criteria. As part of the effort to prevent this, the CDAC recommended that no new real property capital leases be entered during fiscal 1998 and 1999. The CDAC report includes $10 million annually for real property leases beginning in fiscal 2000.

Maryland Stadium Authority

Legislation passed by the 1988 General Assembly authorizes the Maryland Stadium Authority to issue debt to a maximum of $235 million outstanding, $200 million of which may be issued as tax-exempt debt. The law further allocates the funds as follows (Section 13-712 of the Financial Institutions Article):

- $85 million in site acquisition and preparation, relocation, demolition and removal, etc.;
- $70 million for a new baseball stadium; and
- $80 million for a new football stadium.

Cost estimates for the two stadiums have increased over time. Current estimates on which the latest financing plan is predicated, are compared to prior plans in **Exhibit 4.6**.

Exhibit 4.6
Sport Stadium Cost Estimates
($ in millions)

	Feb '87	Nov '88	Jun '89	Nov '94	Nov '95	July '97
Property acquisition and site preparation	$72.3	$99.7	$99.7	$99.9	$99.9	$99.9
Baseball Stadium	68.4	78.4	105.4	(a) 113.6	(a) 113.6	(a) 113.6
Football Stadium	87.0	87.0	114.0	(b) 186.0	(c) 200.0	(c) 220.0
TOTAL	$227.7	$265.1	$319.1	$399.5	$413.5	$433.5

(a) Increased due to change orders and claims settlements.

(b) Included $16 million in football related expenses. Construction estimate was $170 million.

(c) Includes $10 million for additional parking.

In May 1989, the Stadium Authority sold $60.8 million in Sports Facilities Lease Revenue Notes for the purpose of property acquisition. These were taxable bonds and were sold in three series:

1989 A - $24,280,000 due December 15, 1989

1989 B - $19,115,000 due December 15, 1990

1989 C - $17,450,000 due December 15, 1992 through 2019

The Stadium Authority sold $137 million of tax-exempt bonds in November 1989 (series 1989 D). This sale was $32 million over the amount in the "First Amended Plan of Financing" and enabled the Stadium Authority to make the maximum use of tax-exempt financing. Under federal law, only 25% of tax-exempt financing may be used for land acquisition; therefore, the increased cost of the baseball stadium allowed a greater portion of the land acquisition costs to be financed by tax-exempt bonds. In order to accomplish this maximum use of tax-exempt financing, the Stadium Authority received approval from the Board of Public Works to issue bonds totaling $103.8 million for construction of the baseball stadium. The Stadium Authority then utilized $33.8 million of proceeds from the $137 million in Series D bonds together with $9.6 million in lottery proceeds to defease $43.4 of taxable bonds (Series A and B).

The $103.8 million in bonds for construction of the baseball stadium exceeded the $70 million limit in the statute. (See discussion of Financial Institutions Article Section 13-712 above.) The Board of Public Works, after notification to the Legislative Policy Committee, authorized the Stadium Authority to exceed the internal limits, but not the aggregate limit. Although the bonds outstanding for the baseball stadium ($103.8 million) exceeded the limit, the bonds outstanding for the site acquisition ($51.2 million) were less than the limit. In aggregate, the outstanding bonds totaled $155.0 million or the combined amount of the site acquisition and baseball stadium limits. The balance of the total project cost of $213.3 million (site acquisition - $99.7 million and baseball stadium - $113.6 million) was paid by lottery proceeds ($50.2 million) and the authority's own-source revenues.

The income from which the authority expects to make debt service payments on all bonds will be derived in the most part from appropriations made pursuant to a lease between the State and the authority. The obligation of the State is subject to legislative appropriation and will be provided from monies derived from sports lotteries. In addition, the authority's debt service may be payable from the annual $1 million grant by Baltimore City, rental and other income received from the baseball stadium pursuant to the lease between the authority and the Orioles, funds created by the bond resolution, an assignment of a lien on property and improvements financed with the bond proceeds, and an assignment of all rights granted under leases executed between the authority and/or the State and/or the Orioles.

The Stadium Authority covered the cost increases for the baseball stadium through the initiation of a third sports lottery which began in 1990. Although the authority's 1988 financing plan called for the use of a third lottery beginning in 1991, its purpose was to fund the football stadium and not to supplement the baseball stadium.

Football Financing

On November 15, 1995, the Board of Public Works approved the Memorandum of Agreement between the Maryland Stadium Authority and the Cleveland Browns, which had been signed by those parties on October 27, 1995. The agreement was approved by the National Football League in January 1996. It calls for the team, now called the Baltimore Ravens, to lease a new football facility at Camden Yards for 30 years beginning with the 1998 season. The stadium will be an open air, natural grass, state of the art football facility seating 68,400 with 108 luxury suites and 7,500 club level seats.

Under the agreement with the team the Ravens will not pay rent for the use of the facility, but will be responsible for the year-round maintenance, operation, and security of the facility. The Ravens will use Memorial Stadium for the 1996 and 1997 seasons rent free with the Stadium Authority's share of the 10% admissions taxes covering the costs of operation. The Stadium Authority may participate in the construction of a training facility for the Ravens, although legislative approval would be required since the site would not be at Camden Yards. To the extent that funds remain from the stadium construction budget, the team would be reimbursed for the training facility construction costs. The Stadium Authority is required to deposit $200,000 annually into a capital improvement fund so that a balance of $600,000 is maintained.

Until July 1997, the total project was estimated to cost $200 million, but that figure was revised to $220 million in late July as the Stadium Authority presented an amendment to the agreement with the Ravens to the Board of Public Works. The cost of concrete and the general robustness of the State's economy have been cited as reasons for the cost overrun. The project is comprised as follows:

	($ in millions)
Construction	$193
Design/construction management	17
Additional parking	10
TOTAL	$220

The Board of Public Works approved the sale of $87.565 million in tax-exempt Sports Facilities Lease Revenue Bonds in April 1996, and the bonds were sold that same month. This amount is the maximum available for football stadium debt under the statutory limit of $235 million in bonds outstanding. The bonds sold at a true interest rate of 5.761% and are for a thirty year term. The bonds are structured so that no principal payments will be made until fiscal 2000, after the construction is completed. Neither capitalized interest nor a debt service reserve fund were included in the bond package in order to maximize the amount of bond proceeds available for construction. Interest only payments of $4.3 million in fiscal 1997 and $4.9 million in both fiscal 1998 and 1999 will be paid from lottery proceeds appropriated in the Stadium Authority's budget for those years. Debt service of $6.42 million will be required annually to make principal and interest payments beginning in fiscal 2000.

The lease revenue bonds are only one component of the financing plan. **Exhibit 4.7** below describes the complete plan:

Exhibit 4.7
Football Stadium Funding Sources
($ in Millions)

Lease Revenue Bonds		
Fiscal 1996, net of issuance costs		$ 86.5
Lottery Proceeds		66.0
Balance 6/30/95	$ 2.8	
Fiscal 1996	20.0	
Fiscal 1997-99	43.2	
Savings from Refunding		
Baseball Bonds		15.5
Other Sources		52.0
Interest Earnings	6.3	
Additional Financing	4.6	
Sale of naming rights	10.0	
Payment by Balt. Ravens*	10.0	
Other Authority Sources	21.1	
Total		$220.0

*HB 1267, enacted during the 1996 session, requires the Ravens to pay the State $24 million over the life of its lease of the football stadium. The Ravens have agreed to pay up to $10 million of this amount during the construction of the stadium.

The financial plan anticipates that the Stadium Authority will receive $32 million in lottery revenues annually for fiscal years 1997 through 1999. Of this $96 million appropriated during the construction period, $43.5 million will be available for pay-as-you-go financing once the debt service is paid on both the baseball and football bonds. The cash flow plan calls for $22 million in lottery revenues in fiscal 2000.

Beginning in fiscal 2001, the Stadium Authority will require $20 million a year in lottery revenues to pay the debt service on the baseball and football bonds. The State Lottery Agency instituted a multi-state lottery in September 1996, The Big Game, with the proceeds directed to the Stadium Authority to supplement the revenue generated by sports-related instant games.

Lottery revenues fell short of the $32 million goal in fiscal 1997 by more than $500,000. The Stadium Authority and the Lottery Agency have indicated their intentions to make up that shortfall by generating additional funds in fiscal 1998. If the additional funds are generated by the sports-related lotteries, a budget amendment would be required to credit more than $32 million to the Stadium Authority's budget.

Earlier versions of the financing plan had assumed that the authority would receive as much as $5 million from the sale of permanent seat licenses (PSLs). This was based on an estimated $80 million to be raised from the PSLs with the first $75 million being credited to the football team. The team's marketing plan for PSLs was scaled back to raise a total of $68 million, all of which will be retained by the team to cover relocation expenses, debts owed in Ohio, construction of the training facility, and NFL assessments. The Stadium Authority had discussed the possibility of deferring the approved renovations to the Camden Station as a source of funds to cover this shortfall. That project has taken longer than anticipated to get underway, as the Babe Ruth Museum was having trouble accumulating the matching funds needed for its share of the project. A recent gift from the Baltimore Orioles has helped the museum reach its goal, and the project is again progressing. Recent cash-flow projections from the Stadium Authority show the Camden Station project being funded in fiscal years 1998 and 1999. The success of the Orioles' 1997 season and increases in ticket prices contributed to the Stadium Authority's improved cash flow.

House Bill 1267 (Chapter 327 of the Laws of 1996) requires that the lease agreement with the Baltimore Ravens include a provision that the team reimburse the authority for $24 million in stadium construction costs, including the construction, fitting out, and furnishing of the private suites. The act also establishes the Public School Construction Fund which will receive a total of $24 million from the Stadium Authority, payable at $2.4 million annually from fiscal 2001 through fiscal 2010.

Budget bill language was adopted with the fiscal 1998 budget expressing the General Assembly's intent that no additional State funds (over the contributions outlined in the financing plan adopted in March 1996) would be appropriated to the stadium construction project. The reality of the cost overruns, therefore, required the Stadium Authority to find funds from other sources, with the team being a logical one.

In July 1997, the Board of Public Works approved amendments to the agreement with the Baltimore Ravens which address this issue of funding the stadium's construction costs. First, the amendment established the payment stream for the $24 million in construction costs to be reimbursed by the team. The team has agreed to pay up to $10 million on or before June 30, 1999 if needed to pay for "unique design elements" of the construction, with the balance to be paid at $800,000 annually. Secondly, the team will pay $10 million on or before December 31, 1997 for construction expenses. In exchange for this additional contribution of $10 million, and to provide a source of revenue for timely payments toward the $24 million obligation, the team now owns the rights to sell the name of the football stadium to a corporate sponsor.

The Stadium Authority's lease agreement with the Orioles contains a parity clause, allowing the parties to renegotiate certain elements in the event different, more favorable terms were subsequently offered to a football team. The Orioles have indicated their intention to seek renegotiation on a number of points, including parking availability, scheduling and revenue sharing for non-football/baseball events, and the number of luxury boxes. The issue of rent is also significant. The Orioles currently pay rent based on percentages of revenues from parking, concessions, tickets, etc. and are responsible for day-of-game expenses, field maintenance, and cleaning the Orioles facilities within the stadium. The Ravens, on the other hand, pay no rent but assume all operations and maintenance expenses year-round, not just day-of-game, and retain all revenues from concessions and parking. The sale of the naming rights to the Ravens adds another element to possible parity discussions, as the Orioles may seek to purchase similar rights.

This no-rent provision in the Ravens agreement has allowed the Stadium Authority to issue tax-exempt bonds. A provision in the 1986 Tax Reform Act allows for tax-exempt issues if no rent is charged or if the rent is less than 10% of the debt service payment.

Convention Center Financing

Baltimore Convention Center

During the 1993 Session, legislation was enacted (Chapter 400) which authorized the expenditure of $101 million in State funds to expand and renovate the Baltimore Convention Center. The Maryland Stadium Authority issued the financing plan for expansion of the Baltimore Convention Center which was approved by the Board of Public Works on September 1, 1993. The legislation also provides that operating deficits will be paid one-third by Baltimore City and two-thirds by the State.

The project costs totaled $174.4 million as set forth below:

Revenue	($ in millions)
State general obligation bonds	$58.0
Authority lease/revenue bonds	55.0
Baltimore City contribution	50.0
Vendor and utility rebates	13.4
Interest on construction fund	2.0
TOTAL	$178.4
Expenditures	
Construction	$172.2
Capitalized interest, revenue bonds	5.7
Issuance costs-revenue bonds	.5
TOTAL	$178.4

The State included $20 million for the expansion project in its October 1993 bond sale, and the Stadium Authority issued $55 million (including capitalized interest and cost of issuance) in revenue bonds in August 1994. The State provided an additional $20 million in general obligation bond funding in fiscal 1996 and the final $10 million of the State's $50 million general obligation bond funding commitment was provided in fiscal 1997. The remaining $50 million cost of the center expansion has been borne by the City of Baltimore, which issued $57 million in city revenue bonds.

Cost overruns became apparent during the budget deliberations in the 1996 session. The Stadium Authority received an additional appropriation of $8 million in general obligation bonds to cover the escalating price of steel and gypsum. The project was also able to take advantage of $11 million from Baltimore Gas and Electric for utility rebates ($6 million) in their energy conservation program and for the construction of a chilled water plant ($5 million) to serve several downtown blocks. Smaller rebates were received from the concessionaire and the steam company.

Debt outstanding and debt service for the Baltimore Convention Center are included in the debt affordability exhibits.

Construction of the expansion was completed as scheduled in September 1996. Renovation of the existing center was then undertaken, and the entire facility was open for business in April 1997.

Ocean City Convention Center

The 1995 General Assembly passed HB 1370 (Chapter 603) authorizing the Maryland Stadium Authority to issue revenue bonds for the renovation and expansion of the Ocean City Convention Center. The construction is expected to cost \$30.75 million with funding split 50/50 between the State and Ocean City. The Maryland Stadium Authority's issuance of \$17.34 million in October 1995 included capitalized interest. In addition, the General Assembly authorized \$500,000 in general obligation bonds in the 1994 session for planning purposes. The total project will cost \$34.9 million as set forth below:

Revenue	($ in millions)
State general obligation bonds (1994)	$ .50
Maryland Stadium Authority revenue bonds, inc. capitalized interest (Oct 1995)	17.34
Ocean City contribution (1994)	.50
Ocean City Contribution (Oct 1995)	14.70
Interest on construction fund	1.86
TOTAL	$34.90
Expenditures	
Planning	$1.00
Construction	30.75
Contingencies	1.29
Capitalized interest on revenue bonds	1.62
Issuance cost on revenue bonds	0.24
TOTAL	$34.90

Under the terms of HB 1370 the Maryland Stadium Authority entered into a written agreement with Ocean City requiring:

- the Maryland Stadium Authority to be in charge of the expansion and renovation project;

- Ocean City to promote, operate and maintain the completed center in a manner which maximizes the centers economic return and keeps the facility in first class operating condition;

- the authority to contribute one-half and the city to contribute one-half to the annual operating deficits of the completed center for the life of the State's bonds (20 years); and

- the authority and the city to each annually contribute $50,000 to a capital improvement reserve fund for the center.

The bonds issued by the Stadium Authority were not general obligation bonds and thus were not included within the annual general obligation bond limit. They are State tax supported, however, and are thus included within the 3.2% affordability standard for outstanding State tax supported debt. The project was substantially completed by October 1997.

Montgomery County Conference Center

The fiscal 1995 operating budget contained a $300,000 grant to provide funds for preparing various studies concerning a Montgomery County Conference Center. In addition the capital budget authorized $150,000 to assist in the preliminary design of a new center. Chapter 407 of the Laws of 1996 authorizes the Stadium Authority to issue bonds sufficient to contribute $17,304,000 to the capital costs of this center.

The conference center is planned to include nearly 100,000 square feet of ballroom, meeting, and exhibition space. A 225-room hotel is also planned for the complex which is to be located in Rockville, across from the White Flint Metro station. Marriott International and Quadrangle Development are partners with the Stadium Authority and county in the project. In all, the complex represents a $60 million investment.

The total cost of construction of the conference facility is estimated at $27.5 million. The State has agreed to participate at 50% of that total ($13.75 million). In addition, the Stadium Authority's bonds provide an amount equivalent to the first 36 months of debt service ($3.554 million) on the bonds to be issued by Montgomery County for its 50% share of construction costs. Bond issuance costs are estimated at $300,000 for the Stadium Authority bonds. Montgomery County has an agreement to purchase a 12-acre parcel on the west side of Rockville Pike for $7.5 million from the Washington Metro Area Transit Authority. In April 1997, the County Council rezoned the land from residential to commercial zoning. A hearing examiner has been taking testimony during the summer of 1997 and will render a decision prior to the end of the year on the county's compliance with rezoning procedures.

Pending the favorable decision by the hearing examiner, the Stadium Authority will resume the design process. Sale of the bonds and ground-breaking could occur in the spring of 1998, as soon as all the parties enter into formal agreements.

Under the terms of Chapter 407, the Maryland Stadium Authority will enter into a written agreement with Montgomery County requiring:

- that Montgomery County contribute $10.2 million for the capital construction costs;

- that any cost overruns or savings on the construction of the center be shared equally between the State and the county;

- that both the Stadium Authority and the county each own a 50% leasehold interest as tenants in common for the duration of the Stadium Authority's bonds;

- Montgomery County to market, promote and operate the center in a manner which maximizes its economic return;

- Montgomery County to maintain the facility in a first class operating condition; and

- Montgomery County to be solely responsible for all expenditures relating to the operation of the center, including any net operating deficits (the county will keep any operating profits).

The bonds to be issued by the Stadium Authority are not general obligation bonds and thus are not included within the annual general obligation bond limit. They are State tax supported, however, and are thus included within the 3.2% affordability standard, with the sale anticipated during fiscal 1998.

Bond Anticipation Notes (BANS)

In response to the savings and loan crisis in May 1985, the General Assembly authorized $100 million in general obligation bonds. The State utilized the authorization as security for the issuance of Bond Anticipation Notes (BANS). The final BANS redemption occurred in fiscal year 1990 and during the 1990 session the $100 million general obligation bond authorization was canceled.

Early in the land acquisition phase of the new baseball stadium, the Maryland Stadium Authority issued $18 million in Bond Anticipation Notes. These were retired with funds from the first bond sale.

There are no plans to issue additional BANS at this time nor is there debt outstanding on BANS.

Chapter 5. Economic Factors and Affordability Analysis

Economic factors have a strong influence on whether a particular level of debt is affordable under the criteria adopted by the State. Maryland personal income levels and revenues make up one half of the affordability calculations. Changes in these factors can have a profound effect.

Personal Income

The Department of Legislative Services' estimates of personal income differ from those of the Capital Debt Affordability Committee. The Department of Legislative Services is predicting a slightly higher level of growth for 1998 and 1999 than is used by the CDAC for those years. This results in the Legislative Services' estimate exceeding that of the CDAC by $273 million in 1998 and by $873 million in 1999. In the year 2000 the CDAC is predicting a slightly higher rate of growth in personal income than is Legislative Services, but it is not until 2001 that the level of personal income estimated by CDAC is greater than that estimated by Legislative Services. The CDAC growth rates remain higher than those of Legislative Services through the end of the forecast period. **Exhibit 5.1** compares Legislative Services' estimates of personal income with those of the CDAC.

Exhibit 5.1
Maryland Personal Income - Historical Data and Projections
Comparison of DLS and CDAC Projections
($ in millions)

Calendar Year	DLS Personal Income	% Change	CDAC Personal Income	% Change	DLS - CDAC
1995	$132,784	4.9%	$132,784	4.9%	0
1996	138,399	4.2%	138,399	4.2%	0
1997	145,466	5.1%	145,425	5.1%	41
1998	152,826	5.1%	152,553	4.9%	273
1999	160,458	5.0%	159,585	4.6%	873
2000	168,002	4.7%	167,564	5.0%	438
2001	175,883	4.7%	176,110	5.1%	(227)
2002	184,395	4.8%	185,356	5.3%	(961)
2003	193,565	5.0%	195,087	5.2%	(1,522)

Sources:
DLS 1987-1996 Bureau of Economic Analysis
1997-2003 Department of Legislative Services
CDAC CDAC report, September 1997

Changes in personal income have a large impact on the affordability of the State's debt level. Lower personal income results in higher ratios of debt outstanding for any given level of debt. Levels of outstanding debt that were projected to be affordable in past years may suddenly be close to or over the limit if poor economic conditions result in sizable downward revisions. Improvements in personal income levels have the opposite effect and improve the affordability picture.

Revenue Projections

Exhibit 5.2 presents revenue projections to fiscal 2003. The Department of Legislative Services is projecting slightly higher revenues for 1998 though 2002 than is the CDAC Most of the difference is accounted for by Legislative Services' higher general fund estimates.

Exhibit 5.2
Maryland State Revenue Projections
($ in millions)

Fiscal Year	General Fund	Property Taxes	Transp.	Stadium Related	Total DLS Revenues	CDAC Revenues	DLS - CDAC
1996	$7,211.0	$227.7	$1,261.4	$17.4	$8,717.5	$8,717.5	$0.0
1997	7,617.3	235.4	1,289.0	22.0	9,163.8	9,168.9	(5.1)
1998	7,873.5	240.7	1,295.0	24.5	9,433.6	9,346.3	87.4
1999	8,111.3	246.7	1,280.0	25.1	9,663.1	9,533.5	129.5
2000	8,325.9	252.8	1,303.0	26.6	9,908.3	9,788.8	119.5
2001	8,485.3	259.2	1,340.0	26.6	10,111.0	10,054.9	56.1
2002	8,696.2	265.6	1,376.0	26.6	10,364.4	10,346.1	18.3
2003	8,971.7	272.3	1,411.0	26.6	10,681.6	10,689.7	(8.1)

Source:
General Fund Per DLS October report to the Spending Affordability Committee
Property Tax: 1996 - 1997 Commission on State Debt
1998 - 2003 Department of Legislative Services' Estimate
Transportation & Stadium - CDAC Report, September 1997
CDAC: CDAC Report, September 1997

Revenue levels are factored into the debt service criteria. Higher revenues result in lower ratios of debt service to revenues. Conversely, when revenue growth is slow, higher debt service to revenue ratios occur.

Affordability Analysis

Exhibits 5.3 and 5.4 incorporate the debt limits recommended by the CDAC along with the personal income and revenues estimated by the Department of Legislative Services to determine compliance with the established guidelines for debt affordability. Exhibit 5.3 shows that, for the forecast period, debt outstanding as a percent of personal income peaks in fiscal 1999 at 3.08% and steadily declines until it reaches 2.67% in fiscal 2003. These ratios are well below the affordability limit of 3.2% and are a marked improvement over the 1996 estimates which, due to lower personal income projections, showed the outstanding debt ratio reaching the 3.2% limit in 1998.

Exhibit 5.4 shows that debt service as a percent of revenues starts at 6.35% in fiscal 1999 and climbs to 7.12% in 2003. These ratios, as in past forecasts, are well below the 8% affordability criteria.

Exhibit 5.3
State Tax Supported Debt Outstanding
Components and Relationship to Personal Income

Fiscal Year	General Obligation (a)(b)	Department of Transportation (c) Consolidated (d)	County	Total	Capital Leases	Stadium Authority	Total Tax Supported Debt
		State Tax Supported Debt Outstanding ($ in thousands)					
1994	2,504,009	992,720	19,891	1,012,611	140,846	151,470	3,808,936
1995	2,619,069	1,015,167	15,198	1,030,365	125,191	204,520	3,979,145
1996	2,859,944	946,685	10,200	956,885	115,778	307,185	4,239,792
1997	3,025,412	923,885	5,637	929,522	98,351	302,905	4,356,190
1998	3,270,627	981,570	5,261	986,831	97,642	297,740	4,652,840
1999	3,500,387	1,048,205	4,736	1,052,941	104,093	292,255	4,949,676
2000	3,673,936	1,039,845	4,177	1,044,022	120,740	284,295	5,122,993
2001	3,785,900	960,750	3,582	964,332	131,160	277,140	5,158,532
2002	3,884,585	871,105	2,944	874,049	136,074	268,860	5,163,568
2003	4,008,930	764,870	2,269	767,139	140,219	260,050	5,176,338
		State Tax Supported Debt Outstanding as a Percent of Personal Income (Affordability criteria standard = 3.2%)					
1994	1.98%	0.78%	0.02%	0.80%	0.11%	0.12%	3.01%
1995	1.97%	0.76%	0.01%	0.78%	0.09%	0.15%	3.00%
1996	2.07%	0.68%	0.01%	0.69%	0.08%	0.22%	3.06%
1997	2.08%	0.64%	0.00%	0.64%	0.07%	0.21%	2.99%
1998	2.14%	0.64%	0.00%	0.65%	0.06%	0.19%	3.04%
1999	2.18%	0.65%	0.00%	0.66%	0.06%	0.18%	3.08%
2000	2.19%	0.62%	0.00%	0.62%	0.07%	0.17%	3.05%
2001	2.15%	0.55%	0.00%	0.55%	0.07%	0.16%	2.93%
2002	2.11%	0.47%	0.00%	0.47%	0.07%	0.15%	2.80%
2003	2.07%	0.40%	0.00%	0.40%	0.07%	0.13%	2.67%

(a) Reflects presumed new authorizations as follows:

General Assembly Session:	1998	1999	2000	2001	2002	2003
For Fiscal Year:	1999	2000	2001	2002	2003	2004
(millions)	$430	$445	$460	$475	$490	$505

(b) Assumes debt service on minibonds is paid at maturity and no minibond put options are exercised.

(c) Net of sinking funds or debt service reserve funds.

(d) Does not include transfers of $25, $40, and $10 million from the Transportation Authority to the Department of Transportation in fiscal 1991, 1992, and 1993. DOT will repay $25 million per year in fiscal years 1995-1997.

(e)

Assumptions: (millions)	1998	1999	2000	2001	2002	2003
G.O. issues	$500	$475	$450	$410	$420	$468
DOT issues	140	160	90	0	0	0
Stadium Authority issues	18	0	0	0	0	0
Capital Leases - Equip. & EPC	25	25	25	25	25	25
Real Property	0	0	10	10	10	10
Personal Income (billions)	152.8	160.5	168.0	175.9	184.4	193.6

Exhibit 5.4
State Tax Supported Debt Service
Components and Relationship to Revenues

Fiscal Year	General Obligation (a)	Department of Transportation Consolidated (b)	Department of Transportation County (c)	Department of Transportation Total	Capital Leases	Stadium Authority	Total Tax Supported Debt Service
	State Tax Supported Debt Service ($ in thousands)						
1994	325,107	81,878		81,878	22,812	13,702	443,499
1995	374,178	100,626		100,626	31,702	16,154	522,660
1996	382,147	121,406		121,406	32,015	17,412	552,980
1997	392,733	135,693		135,693	36,316	22,033	586,775
1998	423,793	146,479		146,479	25,220	24,474	619,966
1999	418,498	144,804		144,804	25,242	25,072	613,616
2000	466,475	151,441		151,441	25,855	26,565	670,336
2001	493,334	129,455		129,455	33,060	26,564	682,413
2002	519,104	135,927		135,927	39,218	26,568	720,817
2003	546,421	148,016		148,016	39,042	26,569	760,048
	State Tax Supported Debt Service as a Percent of Revenues (Affordability criteria standard = 8%)						
1994	4.73%	7.01%		7.01%	0.33%	100.00%	5.50%
1995	5.11%	8.12%		8.12%	0.43%	100.00%	6.10%
1996	5.14%	9.63%		9.63%	0.43%	100.00%	6.34%
1997	5.00%	10.53%		10.53%	0.46%	100.00%	6.40%
1998	5.22%	11.31%		11.31%	0.31%	100.00%	6.57%
1999	5.01%	11.31%		11.31%	0.30%	100.00%	6.35%
2000	5.44%	11.62%		11.62%	0.30%	100.00%	6.77%
2001	5.64%	9.66%		9.66%	0.38%	100.00%	6.75%
2002	5.79%	9.88%		9.88%	0.44%	100.00%	6.95%
2003	5.91%	10.49%		10.49%	0.42%	100.00%	7.12%

(a) Forecast assumes debt service on minibonds is paid at maturity and no minibond put options are exercised.

(b) Does not include transfers of $25 million per year in fiscal years 1995-1997 from the Department of Transportation to the Transportation Authority to repay the Authority for the transfer of $25, $40, and $10 million in fiscal 1991, 1992, and 1993.

(c) Repayments from counties equal or exceed debt service requirements.

(d) Includes $30 million early redemptions of Series 1979 and 1980.

(e) Transfers from the Stadium Facilities Fund to the Stadium Authority are assumed to be just sufficient, when coupled with the Authority's own-source revenues, to meet debt service requirements.

The debt outstanding ratios based on Legislative Services' personal income estimates are slightly lower in the first half of the forecast period than the ratios estimated by the CDAC, and slightly higher in the second half than those of the CDAC. **Exhibit 5.5** compares the two sets of debt outstanding ratios.

Exhibit 5.5
Comparison of Debt to Personal Income Ratios

Fiscal Year	DLS	CDAC
1998	3.04%	3.05%
1999	3.08%	3.10%
2000	3.05%	3.06%
2001	2.93%	2.93%
2002	2.80%	2.79%
2003	2.67%	2.65%

Chapter 6. Non-Tax Supported Debt

In addition to the five types of tax supported debt that Maryland issues, there are various forms of non-tax supported debt that are issued by State agencies and non-state public purpose entities. While this debt is not backed by the full faith and credit of the State and is not included within the tax supported debt criteria, a default in payment of debt service on this debt could negatively impact other Maryland debt.

Revenue Bonds

Debt service on revenue bonds is generally derived from the revenue generated from facilities built with the bond proceeds. The Department of Housing and Community Development's Community Development Administration (CDA) makes housing loans with revenue bond proceeds and the mortgage payments help pay debt service. Likewise the Maryland Transportation Authority constructs toll facilities with bond proceeds and the tolls collected pay off the bonds. Other State agencies issue bonds for various purposes.

Debt Issuance

Growth in the amount of non-tax supported agency debt has been a concern of both the General Assembly and the Capital Debt Affordability Committee. During the 1989 session the General Assembly passed SB 337 in an attempt to establish a measure of control over agency debt. This legislation was vetoed by the Governor who addressed the issue through the issue of Executive Order 01.01.1989.13. The order established a procedure whereby the Governor sets a revenue bond debt ceiling each year and allocates the debt allowance among the State agencies. Agencies are not allowed to issue debt in excess of the allocations (although the allocations may be amended) and must inform the Department of Budget and Management (DBM) prior to the issuance of debt. DBM is required to submit an annual report at the beginning of each session on the amount of agency debt outstanding. The debt ceiling and allocation amounts must be published in the *Maryland Register*. **Exhibit 6.1** shows the allocation and issuances for the agencies subject to the issuance cap for fiscal 1996 and 1997 and the fiscal 1998 allocation.

Exhibit 6.1
State Agency Debt Allocations and Issuances
($ in millions)

	FY 1996			FY 1997			FY 1998
	---Allocation---			---Allocation---			
Agencies Subject to Allocation Cap	Original	Final	Issued	Original	Final	Issued	Alloc.
Balt. Comm. College	--	--	--	--	--	--	--
CDA - Local Infra.	7,500	10,000	8,405	7,500	15,000	9,860	10,000
MD Envirn. Service	5,000	8,500	6,795	10,000	5,000	3,546	16,500
MD Food Ctr. Auth.	--	--	--	--	--	--	--
Morgan State Univ.	--	--	--	--	--	--	--
St. Mary's College	--	--	--	--	--	--	--
MD Trans. Auth.	--	--	--	--	--	--	--
Univ. System of MD	70,000	70,000	15,000	70,000	70,000	55,000	60,000
Water Qual. Fin. Ad.	65,000	43,000	42,035	--	--	--	50,000
Total	147,500	131,500	72,235	87,500	90,000	68,406	136,500

During the 1997 interim, a workgroup comprised of DBM staff and staff from agencies which issue revenues bonds met to review the provisions of the executive order on agency debt and make recommendations for improvement. The workgroup recommended removing higher education institutions from the process because their levels of debt are already limited by statute. Additionally, the CDA Infrastructure program was recommended for removal from the process because debt of that program is issued on behalf of local governments and is not a debt of the State. The workgroup also recommended changes in reporting dates notification requirements. It was decided that prior notification of issuances need be made only for issuances of $25 million or more. Once the Governor reviews the recommendations it is expected that a new executive order will be signed and will replace the order that has been in effect since 1989.

Private Activity Bonds

Agency debt not subject to the Executive Order is funded through private activity bonds. The Community Development Administration, the Maryland Industrial Development Financing Authority and the Maryland Energy Finance Authority issue private activity bonds to fund projects. These bonds are subject to the unified volume cap, a federal restriction which was imposed by the Tax Reform Act of 1986. The unified volume cap sets a ceiling on annual tax-exempt private activity bond volume for each state equal to the greater of $50 per capita or $150 million. The only tax-exempt private activity bonds not subject to the cap are those issued for nonprofit organizations, for government owned airports, docks, wharves, solid waste facilities, and for other public properties.

The unified volume cap legislation also imposed a 50/50 split of the volume cap between State issuing authorities and local issuing authorities which is subject to change should the Governor or legislature propose an alternative allocation. Unused capacity under the unified volume cap that is not used during the year in which it is received may be carried forward for a period of three years.

Debt Outstanding

Exhibit 6.2 summarizes the increase in debt outstanding for various categories between the years 1987 and 1997. A table containing debt outstanding by year for the individual agencies included in the summary is included as Appendix 2.

Between fiscal 1987 and 1997 general obligation bond and State capital lease debt outstanding has increased by 52.9%. Over the same period, agency debt subject to the Governor's cap has increased by $941.6 million, an increase of 328.7%. Agency debt that is not subject to the Governor's cap (excluding debt of the Maryland Industrial Financing Authority for which debt outstanding figures for years prior to 1997 is unavailable) has grown by over $1.0 billion, an increase of 66.9%.

Although agency debt is not considered an obligation of the State, the Capital Debt Affordability Committee noted in its 1988 report that:

> ...the default of such debt can have a dramatic impact upon the general credit worthiness of a state even when no appearance of a moral obligation exists. In 1983, the Washington Public Power Supply System defaulted on $2.25 billion in tax-exempt bonds issued to build two nuclear power generating plants. This default had a negative impact upon bond market conditions for issuers throughout the Pacific Northwest. (p. 31)

Additionally, increased revenue debt is felt by the citizens of Maryland in the form of higher fees and tuition at State colleges and universities, and as higher utility and other service fees.

Exhibit 6.2
Debt Outstanding as of June 30th
($ in millions)

	1987	1997	% Change
Agency debt subject to ceiling and allocation cap	286.5	1,228.1	328.7%
Agency debt not subject to ceiling & allocation cap*	1,525.2	2,546.0	66.9%
General obligation & State lease debt	2,042.5	3,123.8	52.9%
Transportation debt	186.7	923.9	394.9%
Public purpose/private debt	1,163.9	2,489.7	113.9%

*Excluding Maryland Industrial Financing Authority debt for which debt outstanding numbers prior to 1997 are unavailable.

Source: CDAC reports (1987 & 1997) and Department of Budget and Management

In November 1994, the Legislative Auditor issued a report on State created entities that issue revenue bonds. The report stated that there were no indications of problems regarding either debt service coverage ratios or bond ratings, but that periodic review of this debt was advisable.

In December 1996, Moody's Investor Services placed under review for possible downgrade Multiple-Family Housing Revenue Bonds issued by the Maryland Community Development Administration (CDA) under its 1982 parity indenture. Moody's also indicated its intent to expedite its review of CDA's single-family housing bonds. Moody's concerns were prompted by its review of audited statements of the Maryland Housing Fund (MHF) which insures a portion of the loans financed with proceeds of CDA housing revenue bonds. Moody's questioned the adequacy of the MHF insurance reserves given increased expenses related to provision for possible insurance and loan losses. The Department of Housing and Community Development moved swiftly to address Moody's concerns. The department restructured the single-family housing program so that the bonds will no longer rely on the MHF. A new multi-family bond indenture that does not rely in the MHF had already been created in November 1996. These actions along with other changes in the management of the MHF and bond programs led Moody's to reaffirm the AA ratings for both the multi-family and single-family housing bonds. This experience highlights the importance of continual review of agency debt activities.

Debt Service on Academic Revenue Bonds

Education Article Title 19 (Chapter 93, Laws of Maryland 1989) gave Baltimore City Community College, Morgan State University, St. Mary's College and the University of Maryland System (UMS) the authority to issue bonds for academic and auxiliary facilities. Academic facilities are those primarily used in the instruction of students. Classrooms, for example, are academic facilities. Auxiliary facilities are those which produce fees or revenues from the use of the facility. A residential dormitory is an example of an auxiliary facility. Debt service on auxiliary and academic debt may be paid from auxiliary and academic fees, a State appropriation expressly authorized for that purpose, or revenues from contracts, grants or gifts.

The statute specifies that academic facilities must be expressly approved by an act of the General Assembly which determines both the project and bond issue amount. Each year, the University of Maryland System Administration introduces legislation entitled Auxiliary and Academic Facilities Bonding Authority which lists the specific academic projects that require authorization. This legislation may also increase the UMS total debt limit when warranted. In fiscal 1995, the debt limit was raised to $647.3 million. According to the projections contained in the Report to the Capital Debt Affordability Committee, the debt limit for the University System of Maryland will not need to be raised until fiscal 2001. To date, only UMS has issued academic debt.

Exhibit 6.3 provides a summary of debt service payments for the University of Maryland System between fiscal 1993 and fiscal 1999. In fiscal 1998, total debt service is expected to be approximately 4.2% of unrestricted current fund expenditures and mandatory transfers. The recommended upper limit is 5.5%. Since academic revenue bonds have a twenty year maturity, each bond issuance means that debt service will be spread over many years. For example, bonds issued in fiscal 1990 will impact UMS's operating budget through fiscal 2010.

Based on information contained in the Capital Debt Affordability Committee's September 1997 report, UMS intends to issue approximately $24 million in academic debt and $36 million in auxiliary debt in fiscal 1998. If $30 million in debt is issued, the total UMS debt outstanding (principal only) will be approximately $613 million which is still within the current debt limit. Based on the projections in **Exhibit 6.4**, the total debt outstanding will exceed the current limit of $647 million by fiscal 2001.

It is recommended that no more than $30 million in academic revenue projects be authorized for fiscal 1999. It is further recommend that the cap remain at $647 million. The University of Maryland System has sufficient capacity within the existing cap to issue $30 million in academic and $30 million in auxiliary debt.

Exhibit 6.3
UNIVERSITY OF MARYLAND SYSTEM
ACADEMIC FACILITIES BONDS DEBT SERVICE

			Debt Service (in millions)						
Institution	Projects	Amount Authorized	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
FY 1990									
College Park	Coll. of Business & Mgmt./Sch Pub Affairs	18,205,000							
College Park	A.V. Williams Modular Research, Phase II	16,755,000							
Salisbury	New Academic Building	16,055,000							
	Total	51,015,000	4.7	4.6	4.6	4.5	4.6	4.6	4.6
FY 1991									
College Park	Animal Science Bldg. Addn/Alt, Phase II	15,935,000							
Eastern Shore	Academic/Extension Center	7,900,000							
Baltimore County	Facilities Renewal (HVAC- Soc. Sc. Bldg.)	600,000							
Frostburg	Music/Theater Facility	17,180,000							
	Total	41,615,000	2.3	4.7	4.7	4.7	4.7	4.7	4.7
FY 1992									
Baltimore County	Kuhn Library Addition	19,240,000							
CEES	Geochemistry Facility	5,710,000							
College Park	Computer & Space Sciences Bldg., Ph 1*	15,280,000							
College Park	Renov. of Skinner Hall	2,470,000							
	Total	42,700,000	2.4	2.3	2.3	2.3	2.3	2.3	2.3
FY 1993									
College Park	Plant Sciences Building*	40,000,000		3.4	4.5	4.5	4.5	4.5	4.5
FY 1994									
Various	Facilities Renewal	6,482,000							
at Baltimore	Health Sciences Facility	1,201,000							
CEES	Geochemistry	535,000							
Bowie State	Bowie Utilities Upgrade	1,003,000							
UMES	Physical Education	400,000							
Bowie State	Marshall Library	193,000							
at Baltimore	Physical Plant Shops	4,127,000							
at Baltimore	University Center	300,000							
College Park	Health & Human Performance III	7,974,000							
College Park	Music Theater	2,240,000							

Exhibit 6.3, continued
UNIVERSITY OF MARYLAND SYSTEM
ACADEMIC FACILITIES BONDS DEBT SERVICE

			Debt Service (in millions)						
Institution	Projects	Amount Authorized	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
FY 1995									
College Park	Music Theater	4,439,000							
at Baltimore	Health Sciences Library*	25,485,384							
at Baltimore	Health Sciences Facility (Equipment)	3,250,000							
Salisbury	Holloway Hall	8,537,876							
	Total	41,712,260				0.9	1.8	1.8	1.8
FY 1996									
College Park	Music Theater*	40,000,000							
FY 1997									
College Park	Music Theater**	23,500,000							
Various	Facilities Renewal Projects*	16,500,000							
		40,000,000					1.1	2.0	2.0
FY 1998									
College Park	Steam Plant Improvements	7,609,000							
College Park	Music Theater	1,242,000							
College Park	TAP Replacement Facility	745,000							
Towson	7800 York Road	7,000,000							
UMBI	Medical Biotechnology Ctr.	1,500,000							
Various	Facilities Renewal	11,904,000							
		30,000,000						2.2	3.6
TOTAL DEBT SERVICE			10.9	15.0	16.1	17.0	19.0	22.1	23.5

Exhibit 6.4
University of Maryland System
Capital Program Financing Program
($ in millions)

	Fiscal Year						
	1998	1999	2000	2001	2002	2003	Total
Projected University Debt Issuances							
Academic Revenue Bonds	24	24	25	25	30	30	158
Auxiliary Revenue Bonds	36	36	30	30	25	25	182
Equipment Leases							0
Subtotal	60	60	55	55	55	55	340
State General Obligation Bonds	68	46	67	76	47	76	360
TOTAL	127.6	103.0	122.1	130.9	102.4	130.9	719.8
UMS Academic Debt Outstanding as of June 30th	583.4	613.3	635.9	657.4	680.5	706.2	

Source: FY 1998 Capital Debt Affordability Report, UMS 5-year Capital Improvement Program, and University of Maryland System Administration

Prepared by: Department of Legislative Services

Chapter 7. Market Analysis

This section deals with the market for Maryland's securities, and in particular, how Maryland's general obligation bonds compared to various national scales.

Delphis Scale

Because of the tremendous size of the state and municipal bond market, there are independent companies that gather information about the yield on state and municipal bonds. One such independent company, the Delphis Hanover Corporation, prepares an index that measures the average yield on state and municipal bonds based on daily market activity (Delphis Scale). The Department of Legislative Services has reviewed Maryland's bond yields on the day of sale or day prior to sale from 1990 to the latest sale in 1997 in relation to the Delphis Scale in order to help assess how well the State is performing compared to average yield. (The Treasurer's Office maintains a subscription to the Delphis Hanover Scale and uses this in reviewing Maryland's bond sales.) Maryland's bond yields were compared to the ten-year bond index[1] for AAA and AA+ bonds.

The Treasurer's Office believes the yield on Maryland bonds in the past may have been higher than the yield on AAA and AA+ bonds because of the different institutional setting surrounding the sale of Maryland's bonds and the bonds measured in the Delphis Scale. Maryland's bond sales are "wholesale" transactions to a syndicate of bond brokers, while the Delphis Scale measures transactions on the secondary market. Because Maryland deals with a syndicate at the "wholesale" level, the bonds are sold at a higher yield. The Delphis Scale, however, only measures the transactions in the secondary market, after the bond brokers have already placed the bonds on the market. Because these market transactions tend to have lower yields than the "wholesale" transactions, the Delphis Scale tends to have a lower yield. Although the Delphis Scale is not directly comparable with Maryland's bonds, the relationship is important. A significant change in relationship would raise a question and signal a need for closer review.

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1 The ten-year index is used is because Maryland's bonds are serial bonds, which repay the principal over a number of years, whereas the Delphis Scale measures the yield on term bonds, which pay back all their principal in a single payment at the end of the bond life. In order to adjust the Maryland bonds to the Delphis Scale it is necessary to determine the average maturity of the Maryland bonds, and then compare the average maturity of the Maryland bonds to the corresponding maturity of the Delphis Scale. The average maturity of Maryland bonds is ten years, thus the ten-year bond index is used.

Exhibit 7.1
Interest Rates on Maryland Bonds*
Compared with the Delphis Hanover Ten-Year Scale

Date of Sale	Rate on MD Bonds	Delphis Hanover AAA	MD Rate as % of AAA Rate	Delphis Hanover AA+	MD Rate as % of AA+ Rate
02/07/90	6.67	6.55	101.8%	6.65	100.3%
06/27/90	6.78	6.60	102.7%	6.70	101.2%
09/26/90	7.00	6.90	101.4%	7.00	100.0%
03/13/91	6.31	6.15	102.6%	6.25	101.0%
07/10/91	6.37	6.20	102.7%	6.30	101.1%
10/09/91	5.80	5.70	101.8%	5.80	100.0%
05/13/92	5.80	5.75	100.9%	5.85	99.1%
01/13/93	5.38	5.40	99.6%	5.50	97.8%
05/19/93	5.10	5.10	100.0%	5.20	98.1%
10/06/93	4.45	4.45	100.0%	4.55	97.8%
02/16/94	4.48	4.50	99.6%	4.60	97.4%
05/18/94	5.36	5.35	100.2%	5.45	98.3%
10/05/94	5.69	5.50	103.5%	5.60	101.6%
03/08/95	5.51	5.35	103.0%	5.45	101.1%
10/11/95	4.95	4.80	103.0%	4.90	100.9%
02/14/96	4.51	4.35	103.6%	4.45	101.3%
06/05/96	5.30	5.10	103.9%	5.20	101.9%
10/09/96	4.97	4.90	101.5%	5.00	99.4%
02/26/97	4.90	4.70	104.3%	4.90	100.0%
07/30/97	4.64	4.50	103.1%	4.62	99.8%
Average	5.50	5.39	102.0%	5.50	100.0%

*Maryland rate expressed as True Interest Cost (TIC).

Source: Department of Legislative Services and Delphis Hanover

A review of **Exhibit 7.1** indicates some variation between the yield on Maryland bonds and the Delphis AAA and AA scale. During 1990 to mid 1992 the average yield for the sale of Maryland bonds was slightly above the ten year bond on the Delphis AAA scale. During 1993 and early 1994, the yield on Maryland bond sales was at or slightly below the Delphis AAA scale. Since the October 1994 sale, the yield on Maryland's bond sales returned to being slightly above the Delphis AAA scale.

Bond Buyer Index

The Bond Buyer prepares on a weekly basis four indices of the yields of general obligation bonds. Of these four indices, the Department of Legislative Services uses the Bond Buyer Index of 20 general obligation bonds, and the Bond Buyer Index of 11 general obligation bonds to determine how well Maryland's general obligation bonds are performing. The Bond Buyer Index 20 is an index of 20 bonds with 20 year maturities and an average quality of A1. The Bond Buyer Index 11 is a subset of the Bond Buyer Index 20, that measures 11 bonds, with 20 year maturities with an average quality of AA.

For the past 15 years, Maryland's bonds have consistently outperformed the Bond Buyer Index 20 and Index 11. The average yield of the Bond Buyer Index 20 and Index 11 since 1982 are 7.16% and 7.03%, respectively, while Maryland has an average yield of 6.30%. From the end of 1982 to the beginning of 1988, Maryland's yield was especially low, when compared to the Bond Buyer Index 20. Since 1988, however, Maryland's yield has been much closer to the indices. (See **Exhibit 7.2**).

The spread between Maryland's general obligation bonds and the Bond Buyer Index 20 and Index 11 it is to be expected. Maryland's superior performance can be explained by the fact that the indices measure bonds with 20 year maturities, while Maryland's longest maturity is 15 years and the average maturity of a Maryland bond is about 10 years. The second reason that Maryland's general obligation bonds perform comparatively better is because the Bond Buyer Index 20 has an average rating of A1 and the Bond Buyer Index 11 has an average rating of AA, while Maryland's bonds are rated AAA. While confirming the superior quality of Maryland's AAA bonds, this information only provides a measure of the spread between Maryland's bonds and those of other states.

Although it isn't clear why the spread narrowed between 1988 and 1991, the narrowing of the spreads did coincide with two changes in Maryland's bidding procedures that were instituted in December 1987. The first major change in bidding procedures was the introduction of a call feature, which would clearly lead to an increase in the yield on Maryland's general obligation bonds. While the call feature has particular value to the State at a time of high interest rates, and has resulted in the State's ability to refinance certain bonds, it would appear to have little value when the interest rates are at low levels.

The second major change in bidding procedures was the allowance of bond discounts in the bids which should serve to decrease the yield on Maryland bonds. If these changes in bond procedures are the reasons for the narrowing of the spread between Maryland's yields and the Bond Buyer Index, then it appears that the ability of syndicates to include discounts in bids is not sufficient to offset the additional yield that investors demand for the call provisions.

Exhibit 7.2
Interest Rates on Maryland Bonds*
Compared with The Bond Buyer Indexes for the Thursday Following Sale

Date	Rate on MD Bonds	20 G.O. Bonds	MD Rate as % of 20 Bond	11 G.O. Bonds	MD Rate as % of 11 Bond
06/09/82	11.10	12.13	91.5%	12.08	91.9%
11/10/82	8.37	9.92	84.4%	9.58	87.4%
06/07/83	8.31	9.70	85.7%	9.45	87.9%
02/08/84	8.18	9.56	85.6%	9.40	87.0%
08/15/84	8.78	10.02	87.6%	9.90	88.7%
02/19/86	6.50	7.44	87.4%	7.34	88.6%
06/25/86	6.68	7.59	88.0%	7.43	89.9%
06/17/87	6.44	7.63	84.4%	7.49	86.0%
12/09/87	6.91	8.10	85.3%	7.94	87.0%
04/27/88	6.60	7.77	84.9%	7.63	86.5%
10/05/88	6.72	7.53	89.2%	7.42	90.6%
02/08/89	6.83	7.38	92.5%	7.28	93.8%
06/28/89	6.59	7.02	93.9%	6.93	95.1%
02/07/90	6.67	7.20	92.6%	7.06	94.5%
06/27/90	6.78	7.27	93.3%	7.13	95.1%
09/26/90	7.00	7.53	93.0%	7.36	95.1%
03/13/91	6.31	7.13	88.5%	6.97	90.5%
07/10/91	6.37	7.07	90.1%	6.92	92.1%
10/09/91	5.80	6.66	87.1%	6.52	89.0%
05/13/92	5.80	6.54	88.7%	6.41	90.5%
01/13/93	5.38	6.17	87.2%	6.08	88.4%
05/19/93	5.10	5.77	88.4%	5.68	89.8%
10/06/93	4.45	5.30	83.9%	5.21	85.4%
02/16/94	4.48	5.42	82.7%	5.33	84.1%
05/18/94	5.36	6.14	87.3%	6.04	88.7%
10/05/94	5.69	6.50	87.5%	6.41	88.8%
03/08/95	5.51	6.18	89.2%	6.00	91.8%
10/11/95	4.95	5.82	85.0%	5.74	86.2%
02/14/96	4.51	5.33	84.6%	5.23	86.2%
06/05/96	5.30	5.94	89.2%	5.84	90.7%
10/09/96	4.97	5.73	86.8%	5.63	88.3%
02/26/97	4.90	5.65	86.8%	5.55	88.3%
07/30/97	4.64	5.23	88.7%	5.15	90.1%
Average	6.30	7.16	87.9%	7.03	89.5%

*Beginning Dec. 1987, interest rates are reported in True Interest Cost (TIC) rather than Net Interest Cost (NIC).

The Treasurer's Office believes that the narrowing of the spreads is primarily a function of a change in the yield curve. Since Maryland's bonds tend to be shorter term than the Bond Buyer Index bonds, changes in the relationship between interest rates of bonds with different maturities would impact the spread between the Maryland yield and the Bond Buyer Index.

Proposed General Obligation Authorizations and Estimated Issuances
($ in millions)

General Assembly Session	Proposed Authorization (b)	------- Estimated Issuances During Fiscal Year (a) ----------- 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total Issuanced
1998	430	0	133	108	86	65	39	0	0	0	0	430
1999	445		0	138	111	89	67	40	0	0	0	445
2000	460			0	143	115	92	69	41	0	0	460
2001	475				0	147	119	95	71	43	0	475
2002	490					0	152	123	98	74	44	490
2003	505						0	157	126	101	76	460
2004	520							0	161	130	104	395
2005	535								0	166	134	300
2006	550									0	171	171
2007	565										0	0
												0
Total		0	133	245	340	416	468	483	498	513	528	3,625
Current Authorizations (b)	1,121	500	342	205	70	4	1	0	0	0	0	1,121
Total Issuances		500	475	450	410	420	469	483	498	513	528	4,746

Notes: (a) Percentage issuance assumptions by fiscal year:

Fiscal year following year of authorizations:	1st	2nd	3rd	4th	5th	6th
	31%	25%	20%	15%	9%	

(b) Net of $4 million - the remaining bonds authorized by the Outdoor Recreation Loan of 1969 which are unissued at June 30, 1996.

(c) Includes $17.9 million in fiscal 1997 for the Baltimore Convention Center

Source: *Report of the Capital Debt Affordability Committee*, September 1997.

Debt Outstanding As of June 30th
($ in millions)

	FY87	FY88 (d)	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	% Chng FY87-97
Agency Debt Subject to Ceiling and Allocation Caps											
Balti. City Community College	--	--	--	--	--	--	--	--	--	--	--
Local Govt Infra (CDA)	--	6.1	20.0	28.5	41.0	39.7	42.3	48.5	55.0	62.5	--
MD Envir Service	9.0	8.3	12.1	19.0	18.4	27.2	27.2	29.9	34.8	36.4	304.7%
MD Wholesl Fd Ctr Auth	4.8	4.7	14.2	11.2	11.0	11.0	7.3	7.2	7.2	7.1	47.3%
Morgan State University	4.0	4.0	30.7	30.4	26.7	27.0	28.0	28.9	29.4	29.9	648.6%
St. Mary's College	1.4	4.7	4.4	4.2	4.0	8.9	8.7	8.5	8.1	7.8	458.6%
MD Trans Authority	200.1	198.2	249.1	272.8	272.8	302.5	302.5	465.2	408.4	391.9	95.9%
Univ of MD System (a)	67.2	89.1	259.6	355.0	412.1	461.5	473.8	518.3	505.9	534.5	695.4%
MD Water Qual Finan Adm	--	--	25.6	68.8	107.9	134.0	133.2	163.2	163.4	157.8	--
Total	**286.5**	**315.1**	**615.7**	**789.9**	**893.9**	**1,011.7**	**1,023.1**	**1,269.7**	**1,212.2**	**1,228.1**	**328.7%**
% change/prior year	-0.2%	10.0%	--	28.3%	13.2%	13.2%	1.1%	24.1%	-4.5%	1.3%	
Agency Debt Not Subject to Ceiling and Allocation Caps											
Comm Devel Admin (b)	1,525.2	1,615.4	1,844.2	1,988.5	2,334.9	2,275.6	2,457.4	2,446.5	2,340.8	2,238.3	46.8%
MIDFA					*-----not available-----*					352.3	--
MD Energy Financ Admin	--	--	11.1	14.1	49.8	48.0	44.6	202.6	300.9	307.4	--
Total	**1,525.2**	**1,615.4**	**1,855.3**	**2,002.6**	**2,384.7**	**2,323.6**	**2,502.0**	**2,649.1**	**2,641.7**	**2,898.0**	**90%**
% change/prior year	2.6%	5.9%	--	7.9%	19.1%	-2.6%	7.7%	5.9%	-0.3%	9.7%	
Capital Leases and General Obligation Debt											
Capital Leases - BPW	12.1	47.6	43.6	73.3	100.5	110.7	140.8	125.2	117.1	98.4	715.4%
General Obligation Debt	2,030.4	2,090.8	1,986.9	2,038.4	2,178.2	2,279.4	2,504.0	2,619.1	2,859.9	3,025.4	49.0%
Total	**2,042.5**	**2,138.4**	**2,030.5**	**2,111.7**	**2,278.7**	**2,390.1**	**2,644.8**	**2,744.3**	**2,977.0**	**3,123.8**	**52.9%**
% change/prior year	-3.2%	4.7%	--	4.0%	7.9%	4.9%	10.7%	3.8%	8.5%	4.9%	
Non-state Debt (Not Subject to Ceiling and Allocation Caps)											
Higher Ed Suppl Ln Ath ©	13.9	NA	5.7	5.3	0	0	0	0	0	0	--
Hlth/Higher Ed Fcl Ath	1,150.0	1206.1	1351.9	1655.6	1,863.8	2,064.9	2,254.2	2,256.6	2,348.4	2,489.7	116.5%
Total	**1163.9**	**1206.1**	**1357.6**	**1660.9**	**1,863.8**	**2,064.9**	**2,254.2**	**2,256.6**	**2,348.4**	**2,489.7**	**113.9%**
% change/prior year	10.3%	3.6%	--	22.3%	12.2%	10.8%	9.2%	0.1%	4.1%	6.0%	

Notes:
(a) Combination of University System and State Universities and College debt prior to creation of USM.
(b) Does not include Local Government Infrastructure
(c) Outstanding loans were sold to 1st National Bank of Maryland
(d) Data for fiscal 1989 not compiled.

Source:
1987: Report of the Capital Debt Affordability Committee (1987)
1988: Report of the Capital Debt Affordability Committee (1988)
1990 - 1991: Department of Budget and Fiscal Planning
1992 - 1997: Department of Budget and Management