



**SPENDING AFFORDABILITY
ADVISORY COMMITTEE
REPORT**

Fiscal Year 2010

Spending Affordability Advisory Committee

Fiscal Year 2010



Citizen Committee Members

Frank Aquino, Chairman, Board of Education

Kevin Bell

Richard Clinch, PhD

Barry Curtis

Surender Dhawan, CPA

J. P. Grant

Mary Jane Grauso, PTA Council

Arnold Holz, CPA

Chris Myers

Sang Oh, Esquire

Mary Ann Scully

Todd Snyder, CPA, Esq.

Edward Waddell, CPA

Jonathan S. Weinstein, PMP

Government Officials

Haskell Arnold, CPA, County Auditor

Gale Benson, Assistant Budget Administrator

Raymond Brown, Chief Operating Officer, Department of Education

Lynn Coleman, CPA, Dean of Administration, Howard Community College

Sharon Greisz, CPA, Director of Finance

Lonnie R. Robbins, Chief Administrative Office

Raymond S Wacks, Budget Administrator, Chair of Committee

**Howard County Maryland
Spending Affordability
Advisory Committee
Report for Fiscal Year 2010**

March 2009

Purpose

County Executive Ken Ulman renewed the Spending Advisory Committee in December 2008. His charge to the committee was to:

PHASE I:

1. Explore and evaluate potential general and designated revenue sources for funding school capital projects.
2. Examine and evaluate the possibility of using public-private partnerships, design-build measures, lease-lease back arrangements, and other alternative financing options to fund school construction and renovation projects.
3. Examine the budgeting procedures for school construction and renovation projects to determine if the process can be improved.

PHASE II

1. Review in detail the status and projections of revenues and expenditures for the county, not only for fiscal year 2010, but also for fiscal years 2011 through 2015.
2. Evaluate future county revenue levels and consider the impact of economic indicators such as changes in personal income, assessable base growth, and other data which the committee considers applicable.
3. Evaluate expenditure levels with consideration of the long-term obligations facing the county, and the best way to pay for them.

The committee shall present to the County Executive, a report for Phase I and II responsibilities including:

- a. Recommendations on funding options for education capital projects
- b. Projections of revenue for the upcoming fiscal year
- c. A recommended level of new county debt authorization
- d. The anticipated effect of the committee's budget recommendations on future budgets
- e. Other findings and/or recommendations that the committee deems appropriate

Conclusions and Recommendations

The upcoming years are shaping up to be one of the most difficult periods that this country has faced. For most of us this is the most severe economic downturn we have faced in our lifetime. The country, this state and Howard County will have to deal with a new reality about its finances. At the local level, revenues will not grow as fast as they have over the past decade, and both expenditures and expectations will have to be adjusted to reflect this new reality.

The pre-recession economy was very good for Howard County. The strong real estate market resulted in robust revenue growth and has allowed the county to fund healthy budget increases while at the same time maintaining the required balance in its Rainy Day Fund and reasonable fund balances. The county has a strong, well-balanced economy that plays a leadership role in the State of Maryland. Factors such as location, wealth, a low crime rate, and a robust quality of life helped to maintain that position. Individuals and families continue move to the county and pay premium house prices because of the schools and quality of life in Howard County.

The Committee believes that despite the national and local recessions, the long term outlook for Howard County remains strong. Howard County has a strong and vibrant economy and BRAC related development should begin in the next few years. All of this economic activity should translate into a return to long-term economic expansion and revenue growth for the county.

However, this upcoming year will be a very difficult time for both the national, state and Howard County economies. The collapse of the real estate bubble and the resulting credit crises in the industry and general decline in consumer confidence has resulted in a severe recession. The committee is especially concerned that the impact of this recession will be felt for a number of years even if there is a timely national recovery because of revenue collection patterns primarily in income tax but also in development related revenues and property tax. The impact of this recession will be felt for a number of years even if there is a timely national recovery. The expected decline in revenue from the local income tax will take several years to work through the collection system. The decline in income tax collections from the bad economy in calendar years

Appendix I – Howard County Debt Measures

Appendix I: Howard County Debt Measures

In order to determine Howard County's relative debt position, the Committee in past years has evaluated Howard County's debt based on measures used and data published by Moody's Investor Service and International City/County Management Association publications. The measures used by the county are as follows:

1. Debt measured as a percent of the County's assessable base. The County Charter limit currently is at 12% of assessed value. Since the State of Maryland has moved from the 40% cash value assessment of real property, to full cash value assessment, to remain consistent with the Charter limitation, County debt should not exceed 4.8% of the full value assessment.
2. Debt measured against the population on a per-capita basis. Per-capita debt of \$1,200 (unadjusted for inflation over the past 10 years), which may be considered excessive by rating agencies.
3. Per-capita debt measured as a percent of the jurisdiction's per-capita personal income. This measure should not exceed 10% in the view of many analysts.
4. Debt Service as a percent of current revenues. Ten percent or below is considered an appropriate level, with 15% and above as a danger point.

Following is the county position as of June 30, 2008 [The comparable position for FY 2007 is shown in brackets]

Update of the Bond Affordability Measures

Measure #1: The County's General Obligation Debt as a Percent of the Assessable Base.

As of June 30, 2008 [2007], Howard County had an assessable base of **\$42,258,202,232** [\$ 36,395,166,030] and a General Obligation Debt of **\$658,635,000** [\$ 600,340,000] not including excise tax funded debt. This meant that the ratio of debt to base was **1.55%** [**1.65%**] of assessed value versus the 4.8% limit.

Measure #2: Debt measured against the population on a per-capita basis.

As of June 30, 2008 [07], Howard County had a population of **282,674** [278,900] and a General Obligation Debt of **\$658,635,000** [\$600,340,000] generating a per-capita debt of **\$2,606.66** [\$2,152.53]

Measure #3: Per-capita debt measured as a percent of per-capita income.

For 2008[07], Howard County residents had an estimated per-capita personal income of **\$60,062**[\$55,734] and a per-capita debt of **\$2,606.66** [\$2,152.53] equaling a per-capita debt of **4.34%** [3.86%] of per-capita income.

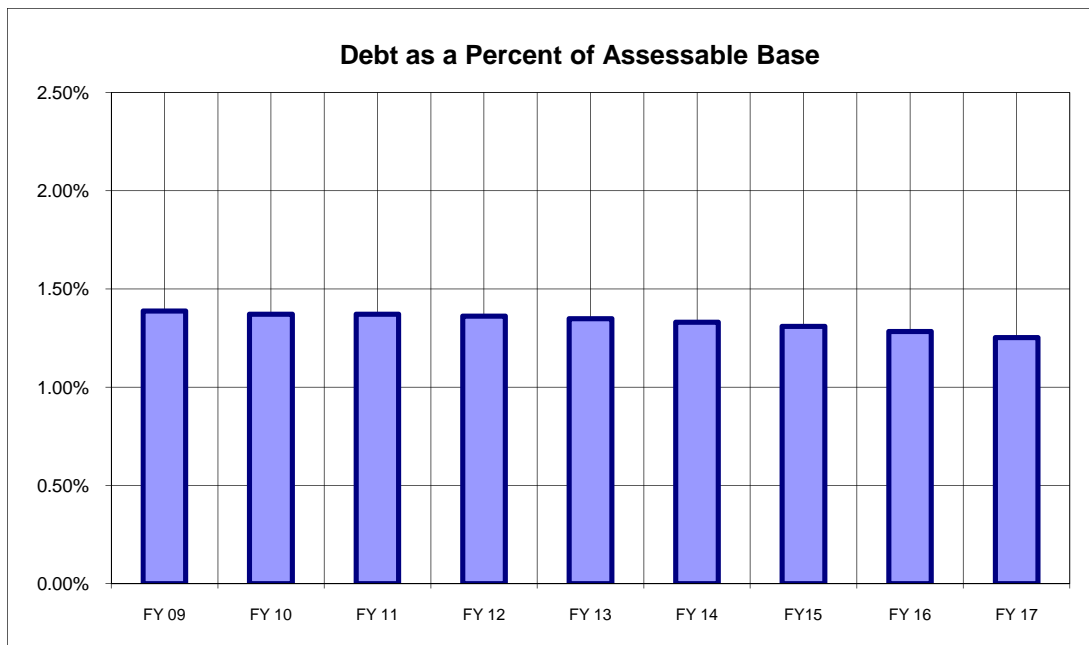
Measure #4: Debt Service as a percent of current revenues.

In FY 2008 [07], the County received **\$846,732,251** [\$819,980,659] in current revenues from the General Fund, Fire and Rescue Fund, and Environmental Fund, and paid debt service of **\$78,878,000** [\$67,797,553]. Thus, debt service equaled **8.00%** [8.27%] of current revenues.

Measure #1: Howard County's General Fund Debt as a Percent of the Assessable Base

Warning Level is: Debt above the Charter limit of 4.8% at full cash value.

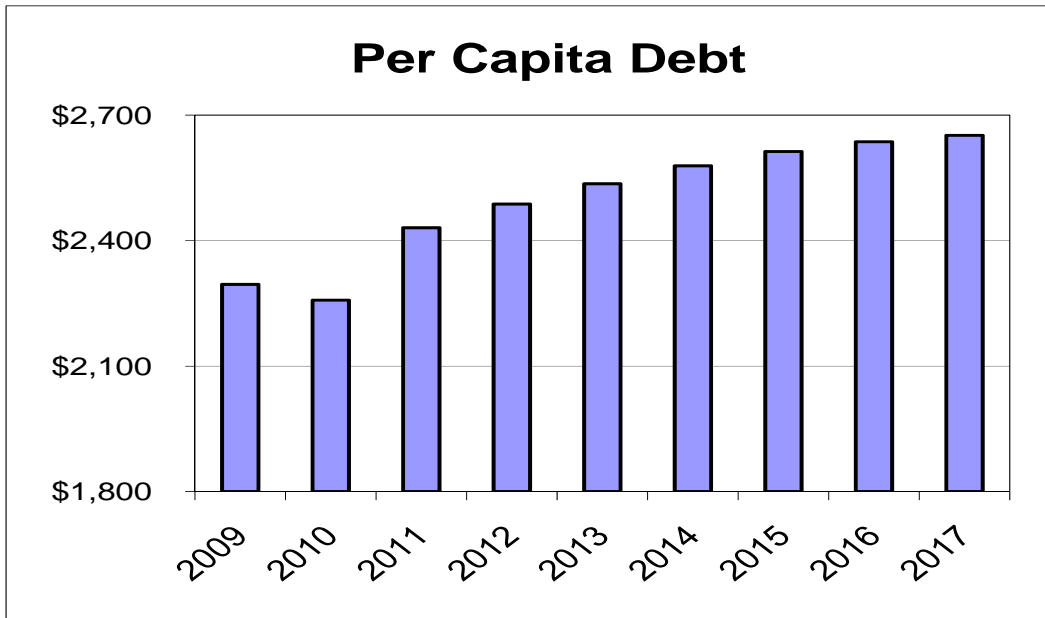
Fiscal Year	County Assessable Base	G.O. Debt at Projected Bonds Sales	Debt as Percent of Base
2009	\$47,148,303,000	\$654,439,324	1.39%
2010	49,949,837,000	684,966,799	1.37%
2011	51,947,830,480	711,851,799	1.37%
2012	54,025,743,699	735,706,799	1.36%
2013	56,186,773,447	757,311,799	1.35%
2014	58,434,244,385	777,801,799	1.33%
2015	60,771,614,160	795,931,799	1.31%
2016	63,202,478,727	810,671,799	1.28%
2017	65,730,577,876	823,191,799	1.25%



Measure #2: Debt Measured Against the Population on a Per-Capita Basis

A Warning Level: General Obligation Debt Per-Capita of greater than \$1,200.

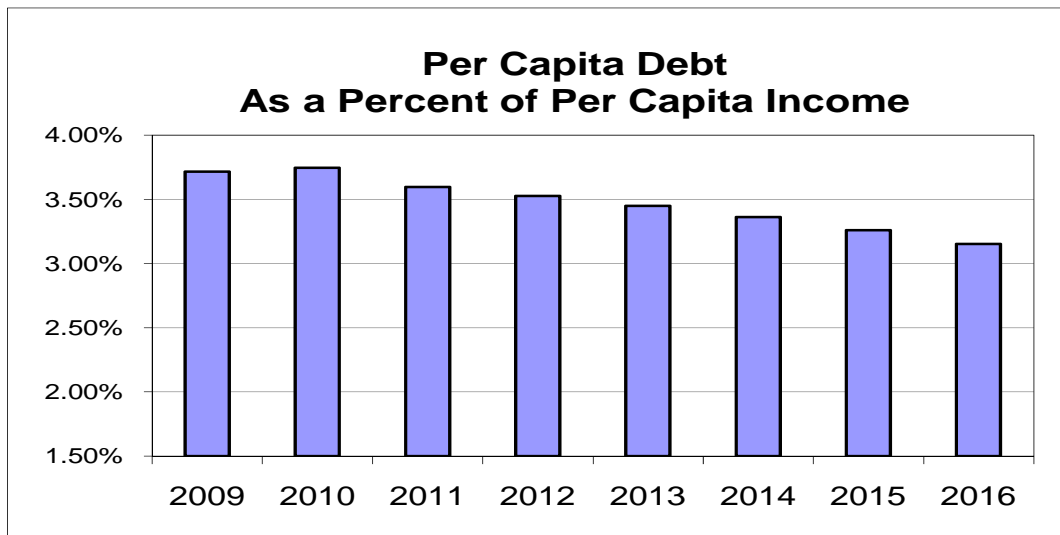
Fiscal Year	Population	Per Capita Debt
2009	286,900	\$2,296
2010	289,850	2,258
2011	292,800	2,431
2012	295,750	2,488
2013	298,700	2,535
2014	301,650	2,578
2015	304,600	2,613
2016	307,550	2,636
2017	310,500	2,651



Measure #3: Per-Capita General Obligation Debt Measured As a Percent of Per-Capita Personal Income

A Warning Level Is: Per-Capita Debt that is equal to 10% of the per capita income for the County.

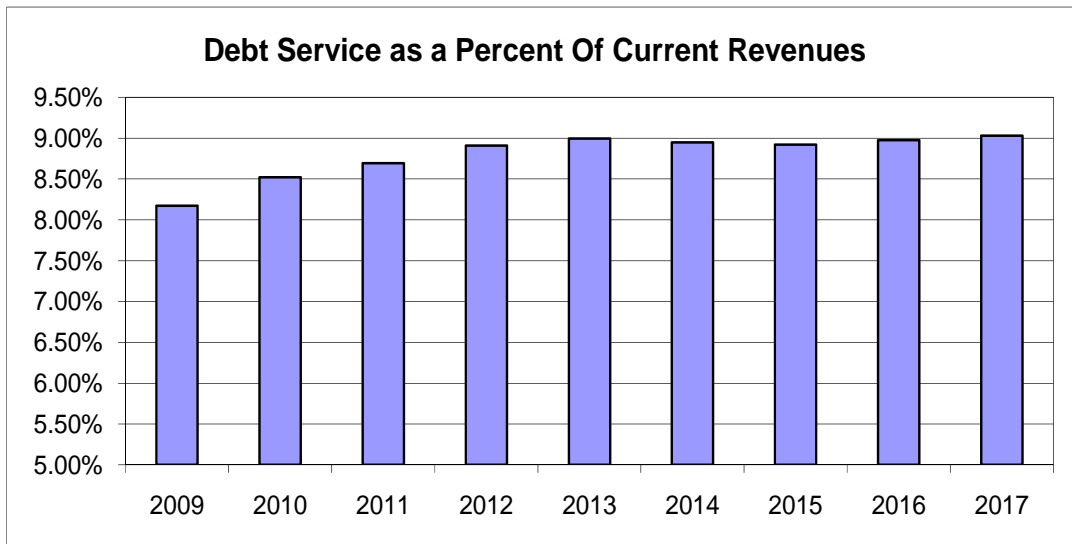
Fiscal Year	Population	Personal Income (thousands) (estimates)	Per-Capita Debt as a Percent Of Per Capita Income
2009	286,900	17,241,000,000	3.82%
2010	289,850	17,610,000,000	3.72%
2011	292,800	19,013,000,000	3.74%
2012	295,750	20,458,000,000	3.60%
2013	298,700	21,480,900,000	3.53%
2014	301,650	22,554,945,000	3.45%
2015	304,600	23,682,692,250	3.36%
2016	307,550	24,866,826,863	3.26%
2017	310,500	26,110,168,206	3.15%



Measure #4: General Obligation Debt Service as a Percent of Current Revenue

A Warning Level is: Debt service as a percent of current revenues more than 15%. In past reports, Howard County has used 12% as a target level.

Fiscal Year	Projected Current Revenue	Projected Debt Service	Percent of Revenue
2009	\$940,302,471	\$76,850,982	8.17%
2010	916,157,629	78,046,758	8.52%
2011	941,008,307	81,781,341	8.69%
2012	972,570,414	86,644,164	8.91%
2013	1,007,012,148	90,578,176	8.99%
2014	1,042,697,720	93,279,438	8.95%
2015	1,079,672,866	96,289,699	8.92%
2016	1,117,985,035	100,320,848	8.97%
2017	1,157,683,449	104,533,000	9.03%



Appendix II
Howard County Revenue/Expenditure Growth
Projection Model

Appendix II:

Assumptions for Howard County Revenue/Expenditure Growth Projection Model

Education Growth Rate	3.00%
Property Tax Growth Rate	4.00%
Income Tax Growth Rate	3.00%
Other Taxes Growth Rate	3.00%
	3%
Bond Interest Rate	5.00%

	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Bond Sale	55,000,000	104,000,000	103,000,000	102,000,000	101,000,000	101,000,000	101,000,000	100,000,000	0
Bonds in Budget	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000	100,000,001
Debt Service	77,691,172	78,046,758	81,781,341	86,644,164	90,578,176	93,279,438	96,289,699	100,320,848	100,320,848
TOTAL GF BUDGET	854,500,087	831,712,399	853,454,493	885,385,522	917,443,642	949,040,300	985,097,040	1,026,505,480	1,071,691,608
Revenue	854,500,087	825,883,281	849,058,484	878,910,343	909,832,961	941,865,471	975,048,456	1,009,424,012	1,045,035,799
Difference	0	(5,829,118)	(4,396,009)	(6,475,179)	(7,610,681)	(7,174,829)	(10,048,583)	(17,081,468)	(26,655,809)
Expenditure Percentage Increase	5.84%	-2.67%	2.61%	3.74%	3.62%	3.44%	3.80%	4.20%	0.00%
Revenue Percentage Increase	2.90%	-3.35%	2.81%	3.52%	3.52%	3.52%	3.52%	3.53%	0.00%

Date Revised:

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Revenue Estimates--Summary

Revenue	Audited FY08	Approved FY09	Estimated FY10	Projected FY11	Projected FY12	Projected FY13	Projected FY14	Projected FY15	Projected FY16	Projected FY17
Property Taxes	\$ 367,835,075	392,965,607	421,163,856	438,010,410	455,530,827	473,752,060	492,702,142	512,410,228	532,906,637	554,222,902
Income Tax	316,724,547	331,151,570	310,000,000	319,300,000	328,879,000	338,745,370	348,907,731	359,374,963	370,156,212	381,260,898
Other Local Taxes	24,130,408	25,408,885	20,000,000	20,600,000	21,218,000	21,854,540	22,510,176	23,185,481	23,881,046	24,597,477
State Shared Taxes	15,513,178	15,790,764	13,841,944	14,257,202	14,684,918	15,125,466	15,579,230	16,046,607	16,528,005	17,023,845
Other--See Below	34,887,734	28,741,457	26,727,882	27,529,718	28,355,610	29,206,278	30,082,467	30,984,941	31,914,489	32,871,924
Investment Income	10,861,405	2,528,600	3,500,000	3,605,000	3,713,150	3,824,545	3,939,281	4,057,459	4,179,183	4,304,559
Interfund Reimbursements	22,755,096	25,272,219	25,005,974	25,756,153	26,528,838	27,324,703	28,144,444	28,988,777	29,858,441	30,754,194
SubTotal	792,707,443	821,859,102	820,239,656	849,058,484	878,910,343	909,832,961	941,865,471	975,048,456	1,009,424,012	1,045,035,799
Prior Years Funds	37,739,594	32,640,985	5,643,625							
General Fund Revenue	\$ 830,447,037	\$ 854,500,087	\$ 825,883,281	\$ 849,058,484	\$ 878,910,343	\$ 909,832,961	\$ 941,865,471	\$ 975,048,456	\$ 1,009,424,012	\$ 1,045,035,799

Notes:

1. Other includes Licenses & Permits, Funds Other Agencies, Charges for Services, Fines/Forfeitures, Money & Property.
2. Property tax revenue growth rate is estimated at 4.5%.
3. Income tax revenue growth rate is estimated at 6.0%.
4. All other revenues grow at a rate of 3.00%.

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General Fund Forecast - FY09 thru FY17

	FY08 Audit	FY09 Budget	Estimated FY10	OUT YEAR PROJECTIONS							
				FY11	FY12	FY13	FY14	FY15	FY16	FY17	
EDUCATION											
Board Of Education	427,176,316	454,794,610	457,196,110	470,911,993	485,039,353	499,590,534	514,578,250	530,015,597	545,916,065	562,293,547	
Community College	23,635,010	25,195,470	26,707,200	27,508,416	28,333,668	29,183,679	30,059,189	30,960,965	31,889,793	32,846,487	
Dept. Of Library	14,374,121	15,553,354	15,553,354	16,331,022	17,147,573	18,004,951	18,905,199	19,850,459	20,842,982	21,885,131	
SUBTOTAL:	465,185,447	495,543,434	499,456,664	514,751,431	530,520,594	546,779,164	563,542,638	580,827,021	598,648,840	617,025,165	

PUBLIC SAFETY										
Department of Police	72,787,721	82,781,143	82,781,143	85,264,577	87,822,515	90,457,190	93,170,906	95,966,033	98,845,014	101,810,364
Department of Corrections	12,782,968	13,189,283	13,189,283	13,584,961	13,992,510	14,412,286	14,844,654	15,289,994	15,748,694	16,221,154
SUBTOTAL:	85,570,689	95,970,426	95,970,426	98,849,539	101,815,025	104,869,476	108,015,560	111,256,027	114,593,708	118,031,519

PUBLIC FACILITIES										
Dept. Of Public Works	47,380,853	43,038,352	43,038,352	44,329,503	45,659,388	47,029,169	48,440,044	49,893,246	51,390,043	52,931,744
Insp. Licenses & Permits	6,382,615	7,077,945	7,077,945	7,290,283	7,508,992	7,734,262	7,966,289	8,205,278	8,451,436	8,704,980
Dept. of Planning & Zoning	6,052,579	6,770,077	6,770,077	6,973,179	7,182,375	7,397,846	7,619,781	7,848,375	8,083,826	8,326,341
Soil Conservation	680,702	729,035	729,035	750,906	773,433	796,636	820,535	845,151	870,506	896,621
Subtotal	60,496,749	57,615,409	57,615,409	59,343,871	61,124,187	62,957,913	64,846,650	66,792,050	68,795,811	70,859,686

COMMUNITY SERVICES												
Citizen Services	7,635,511	8,095,928	8,095,928	8,460,245	8,840,956	9,238,799	9,654,545	10,088,999	10,543,004	11,017,439		
Health Department	8,296,382	9,463,638	9,463,638	10,031,456	10,633,344	11,271,344	11,947,625	12,664,482	13,424,351	14,229,812		
Mental Health Authority	310,000	330,000	330,000	339,900	350,097	360,600	371,418	382,560	394,037	405,858		
Transportation Svcs/Coord.	7,325,325	8,052,468	8,052,468	8,294,042	8,542,863	8,799,149	9,063,124	9,335,017	9,615,068	9,903,520		
Cooperative Extension	413,391	422,524	422,524	435,200	448,256	461,703	475,554	489,821	504,516	519,651		
Community Service Partner.	5,339,554	5,825,997	5,825,997	6,000,777	6,180,800	6,366,224	6,557,211	6,753,927	6,956,545	7,165,241		
Social Services	519,463	668,714	668,714	688,775	709,439	730,722	752,643	775,223	798,479	822,434		
Recreation & Parks	12,788,348	14,018,864	14,018,864	14,439,430	14,872,613	15,318,791	15,778,355	16,251,706	16,739,257	17,241,434		
Subtotal	42,627,974	46,878,133	46,878,133	48,689,825	50,578,367	52,547,333	54,600,475	56,741,736	58,975,258	61,305,391		

GENERAL GOVERNMENT										
County Executive	1,045,732	1,041,247	1,041,247	1,072,484	1,104,659	1,137,799	1,171,933	1,207,091	1,243,303	1,280,602
County Administration	9,126,055	7,975,947	7,975,947	8,215,225	8,461,682	8,715,533	8,976,999	9,246,309	9,523,698	9,809,409
Dept. Of Finance	6,504,976	6,951,514	6,951,514	7,160,059	7,374,861	7,596,107	7,823,990	8,058,710	8,300,471	8,549,485
Office Of Law	2,897,547	3,167,402	3,167,402	3,262,424	3,360,297	3,461,106	3,564,939	3,671,887	3,782,044	3,895,505
Economic Development	1,266,869	1,384,594	1,384,594	1,448,285	1,514,906	1,584,592	1,657,483	1,733,728	1,813,479	1,896,899
Technology & Communication	656,383	982,250	982,250	1,011,718	1,042,069	1,073,331	1,105,531	1,138,697	1,172,858	1,208,044
Revenue Authority	100,000	0	0	0	0	0	0	0	0	0
Performance Awards	483,037	0	0	0	0	0	0	0	0	0
Tuition Reimbursement	80,567	73,750	73,750	73,750	73,750	73,750	73,750	73,750	73,750	73,750
Subtotal	22,161,166	21,576,704	21,576,704	22,243,946	22,932,225	23,642,217	24,374,625	25,130,171	25,909,603	26,713,694

CAPITAL / RESERVES										
Debt Service	74,724,931	77,691,172	78,046,758	81,781,341	86,644,164	90,578,176	93,279,438	96,289,699	100,320,848	100,320,848
Contingency Reserves	0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
OPEB	18,928,376	3,589,779	3,589,779	3,600,000	7,200,000	10,800,000	14,400,000	18,000,000	21,600,000	25,200,000
Subtotal	93,653,307	82,780,951	83,136,537	86,881,341	95,344,164	102,878,176	109,179,438	115,789,699	123,420,848	127,020,848

LEGISLATIVE & JUDICIAL										
County Council	2,916,511	3,314,835	3,306,677	3,405,877	3,508,054	3,613,295	3,721,694	3,833,345	3,948,345	4,066,796
Circuit Court	2,350,718	2,535,756	2,535,756	2,611,829	2,690,184	2,770,889	2,854,016	2,939,636	3,027,825	3,118,660
State's Attorney	5,951,710	6,685,857	6,685,857	6,886,433	7,093,026	7,305,816	7,524,991	7,750,741	7,983,263	8,222,761
Orphans Court	43,681	46,085	46,085	46,546	47,011	52,183	52,704	53,231	106,995	215,060
Sheriff	5,698,972	6,110,991	6,110,991	6,294,321	6,483,150	6,677,645	6,877,974	7,084,313	7,296,843	7,515,748
Board of Elections	2,299,379	2,749,535	2,749,535	3,449,535	3,449,535	3,449,535	3,449,535	6,899,070	13,798,140	27,596,280
Subtotal	19,260,971	21,443,059	21,434,901	22,694,540	23,070,960	23,769,363	24,480,914	28,560,337	36,161,411	50,735,305
Grand Subtotal	788,956,303	821,808,116	826,068,774	853,454,493	885,385,522	917,443,642	949,040,300	985,097,040	1,026,505,480	1,071,691,608
Paygo Funds	18,369,860	32,691,971	5,643,625							

TOTAL GF BUDGET	807,326,163	854,500,087	831,712,399	853,454,493	885,385,522	917,443,642	949,040,300	985,097,040	1,026,505,480	1,071,691,608
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Revenue	830,447,037	854,500,087	825,883,281	849,058,484	878,910,343	909,832,961	941,865,471	975,048,456	1,009,424,012	1,045,035,799
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Difference	23,120,874	0	-5,829,118	-4,396,009	-6,475,179	-7,610,681	-7,174,829	-10,048,583	-17,081,468	-26,655,809
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Expenditure Percentage Increase		5.84%	-2.67%	2.61%	3.74%	3.62%	3.44%	3.80%	4.20%
Revenue Percentage Increase		2.90%	-3.35%	2.81%	3.52%	3.52%	3.52%	3.52%	3.53%

Notes: Education cost increases by 7% per year and debt service interest rate is 4.00%
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BOND AFFORDABILITY COMMITTEE
GENERAL COUNTY BONDS
PROJECTED DEBT SERVICE
Debt Measure #4 Debt as a Percent of Current Revenues

Interest rate		4.00%									
		Fiscal Year	Draft debt Service 9/26/08			FY12	FY13	FY14	FY15	FY16	FY17
			FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
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Current debt service:											
Principal	Principal		45,785,000	47,745,000	42,575,000	41,695,000	39,985,000	37,060,000	34,395,000	32,705,000	32,705,000
Interest	Interest		24,120,390	26,792,406	20,636,021	18,848,360	17,035,000	15,277,000	13,568,000	11,978,000	11,978,000
Total	Current Debt Service		69,905,390	74,537,406	63,211,021	60,543,360	57,020,000	52,337,000	47,963,000	44,683,000	44,683,000
Projected debt service:											
Spring 08 Bond Sale	95,000,000		6,945,592	6,945,592	6,945,592	6,945,592	6,945,592	6,945,592	6,945,592	6,945,592	6,945,592
Spring 09 Bond Sale	55,000,000			4,021,132	4,021,132	4,021,132	4,021,132	4,021,132	4,021,132	4,021,132	4,021,132
Spring 10 Bond Sale	104,000,000				7,603,596	7,603,596	7,603,596	7,603,596	7,603,596	7,603,596	7,603,596
Spring 11 Bond Sale	103,000,000					7,530,484	7,530,484	7,530,484	7,530,484	7,530,484	7,530,484
Spring 12 Bond Sale	102,000,000						7,457,373	7,457,373	7,457,373	7,457,373	7,457,373
Spring 13 Bond Sale	101,000,000							7,384,261	7,384,261	7,384,261	7,384,261
Spring 14 Bond Sale	101,000,000								7,384,261	7,384,261	7,384,261
Spring 15 Bond Sale	101,000,000									7,311,150	7,311,150
Spring 16 Bond Sale	100,000,000										0
	862,000,000		0								0
Subtotal New Debt			0	6,945,592	10,966,724	18,570,320	26,100,804	33,558,176	40,942,438	48,326,699	55,637,848
Total Projected Debt Service			0	76,850,982	85,504,130	81,781,341	86,644,164	90,578,176	93,279,438	96,289,699	100,320,848
				9,384,753	8,653,148	(3,722,789)	4,862,823	3,934,013	2,701,261	3,010,261	4,031,150

**Howard County, Maryland
Projected Future Bond Sales**

Fiscal Year	Authorized But UnSold Bonds	+	Current Year Budget	=	Total Unsold Bonds at Start of Fiscal Year	New Debt Sold (Excl Excise)	Sold as % of Total
2015-2016	221,236,966		100,000,000		321,236,966	100,389,836	31%
2014-2015	221,804,009		100,000,000		321,804,009	100,567,043	31%
2013-2014	222,628,812		100,000,000		322,628,812	100,824,802	31%
2012-2013	223,828,542		100,000,000		323,828,542	101,199,730	31%
2011-2012	225,573,630		100,000,000		325,573,630	101,745,088	31%
2010-2011	228,111,979		100,000,000		328,111,979	102,538,348	31%
2009-2010	231,804,176		100,000,000		331,804,176	103,692,197	31%
2008-2009	186,804,176		100,000,000		286,804,176	55,000,000	31%
			800,000,000				
<u>Actuals:</u>							
2007-2008	164,743,176		96,206,000		260,949,176	74,145,000	28%
2006-2007	139,258,176		90,485,000		229,743,176	65,000,000	28%
2005-2006	129,878,131		85,281,000		215,159,131	57,975,000	27%
2004-2005	108,030,131		78,068,000		186,098,131	56,220,000	30%
2003-2004	69,002,215		79,362,000		148,364,215	40,334,084	27%
2002-2003	76,140,215		47,862,000		124,002,215	55,000,000	44%
2001-2002	66,206,705		43,352,000		109,558,705	33,418,490	31%
2000-2001	61,687,705		27,039,000		88,726,705	22,520,000	25%
1999-2000	67,222,705		25,000,000		92,222,705	30,535,000	33%
1998-1999	62,855,705		29,367,000		92,222,705	25,000,000	27%
1997-1998	81,224,705		27,631,000		108,855,705	46,000,000	42%
						Average	31%

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Appendix III

Howard County Income Tax Projection Models

Howard County Income Tax Projection Models

The models used data and historical and forecasted data from Sage Forecasting and Moody's Economy. Com to create dependent variables to project income tax as follows:

DATE	Receipts	Rate	CapitalGains	Personallnc	BusinessInc
	Local Income Tax	Local Inco	Local Income	Local Income	Local Income
	1986	1986	1986	1986	1986
	1	1	1	1	1
	1	1	1	1	1
	1	1	1	1	1
1986	0	2.50	120,347,000	3,489	26,210
1987	47,852,404	2.50	70,663,000	3,883	98,830
1988	57,041,620	2.50	98,729,000	4,413	122,927
1989	67,600,288	2.50	101,846,000	4,909	119,624
1990	74,371,192	2.50	60,306,000	5,337	136,400
1991	77,396,400	2.50	57,294,000	5,608	150,302
1992	81,837,088	2.50	74,884,000	5,997	116,490
1993	89,202,608	2.50	100,187,000	6,375	129,703
1994	94,227,992	2.50	96,278,000	6,773	155,710
1995	99,641,072	2.50	105,253,000	7,223	194,238
1996	106,717,200	2.50	207,226,000	7,571	231,146
1997	114,991,960	2.50	265,073,000	8,169	211,141
1998	131,088,104	2.50	273,802,000	8,910	179,725
1999	142,058,864	2.40	550,078,000	9,772	240,016
2000	158,001,040	2.41	634,784,000	10,893	278,846
2001	169,793,017	2.43	213,967,000	11,411	256,740
2002	177,693,280	2.45	210,464,000	11,799	288,182
2003	166,626,076	2.45	315,184,000	12,236	295,643
2004	199,561,713	3.20	474,291,000	13,355	326,244
2005	252,524,786	3.20	560,963,000	14,251	382,145
2006	283,064,779	3.20	707,616,000	15,150	379,902
2007	293,306,900	3.20	750,000,000	16,203	380,000
2008	316,724,548	3.20	800,000,000	16,978	380,000

The numbers in red are estimates. The projections of the personal income numbers are from economy.com

Three alternative projections of these variables were developed as follows:

(Personal income is in billions others in millions)												
Variable	2009			2010			2011			2012		
	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High
Personal Income	16,379	16,810	17,241	16,730	17,170	17,610	18,063	18,538	19,013	19,435	19,947	20,458
Capital Gains	150,000	250,000	300,000	150,000	250,000	300,000	150,000	250,000	350,000	150,000	250,000	400,000
Business Income	250,000	250,000	300,000	200,000	250,000	320,000	200,000	250,000	320,000	200,000	250,000	320,000

Using the program Forecast ProXE and their dynamic regression program the Budget Office projected the independent variable Income Tax Receipts. Information on this program is located at the web site:

<http://www.forecastpro.com/products/fpfamily/standard.html>

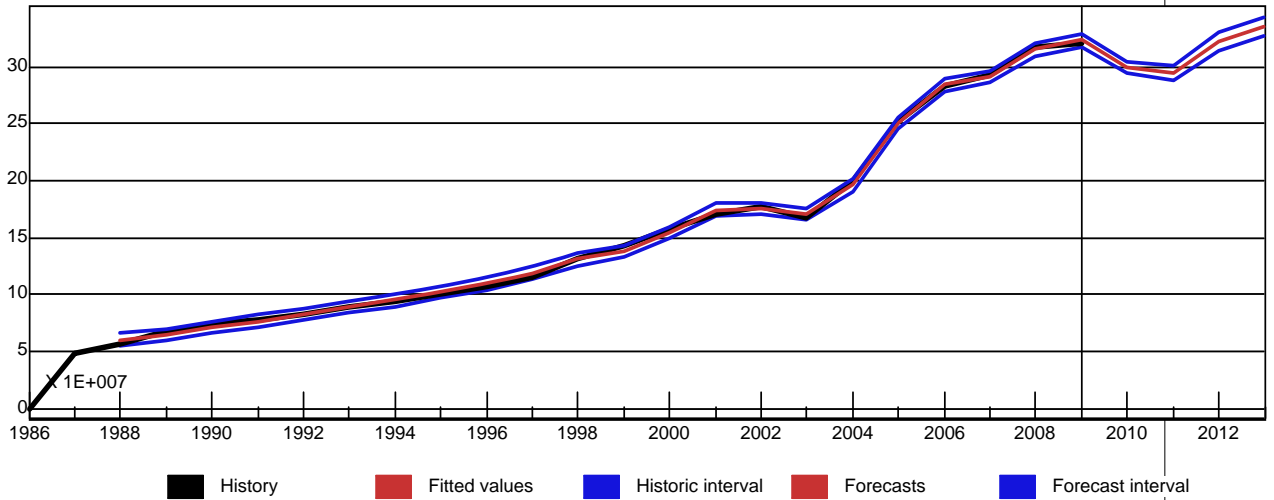
The results are as follows:

(Dollars in millions)												
Variable	2009			2010			2011			2012		
	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High
Income Tax	320,000	320,000	320,000	299,507	309,397	317,864	294,828	304,851	312,164	322,879	333,406	344,144

FY 2009 is my projection

The detailed results of the projection models as generated by the Forecast Pro Data follows.

Sage Low EcodotCom January 2009 Receipts - Local Income Tax



Forecast Report for Receipts

Model Details

Dynamic regression

Regression(5 regressors, 1 lagged errors)

Term	Coefficient	Normalized	Elasticity	Std. Error	t-Statistic	Percentile
Personallnc[-1]	14357	0.6791	0.8565	967.3	14.84	1.000
Rate[-1]	68124234	0.2490	1.140	2547021	26.75	1.000
CapitalGains[-1]	0.03702	0.1098	0.07171	0.004131	8.961	1.000
_CONST	-867853765			976447151	-0.8888	0.6127
_TREND	349863	0.02671	4.429	490848	0.7128	0.5137
_AUTO[- 1]	-0.8512			0.1415	-6.014	1.000

Marked regressors are insignificant.

Within-Sample Statistics

Sample size	22	No. parameters	6
Mean	157885023.95	Std. deviation	85068566.02
R-square	1.00	Adj. R-square	1.00
Durbin-Watson	2.01	Ljung-Box(11)	8.6 P=0.34
Forecast error	3254001.60	BIC	4229841.08
MAPE	1.94%	RMSE	2775021.89

MAD 2439464.62

Variable specification test battery

Term	Test Value	Percentile
BusinessInc[-1]	0.001093	0.02637
PersonalInc[-2]	1.294	0.7446
Rate[-2]	0.4348	0.4903
CapitalGains[-2]	0.5791	0.5533

Variable specification tests successful.

Dynamics test battery

Term	Test Value	Percentile
Receipts[-1]	0.002581	0.04052
Receipts[-2]	0.9296	0.6650
_AUTO[-2]	0.3924	0.4689
Common factor test Chi Square(3)	2.071	0.4422

Dynamics tests successful.

Historic Data

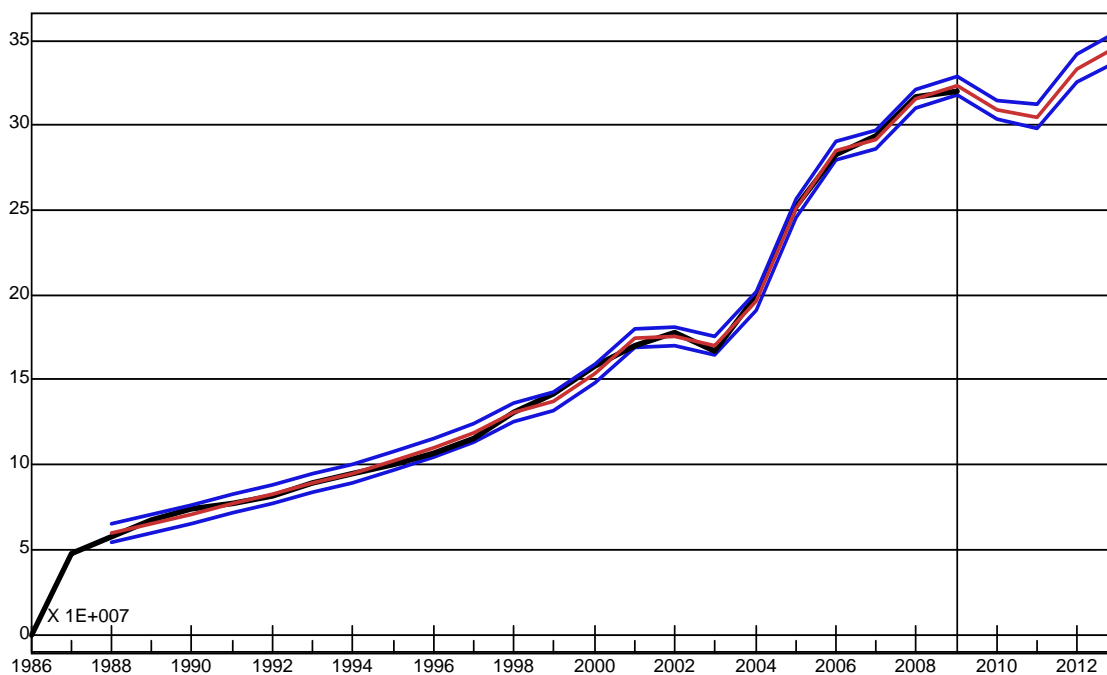
Date	Historic	Annual	Fitted	Annual
1986	0.00	0.00		
1987	47852404.00	47852404.00		
1988	57041620.00	57041620.00	60033478.17	60033478.17
1989	67600288.00	67600288.00	64751369.80	64751369.80
1990	74371192.00	74371192.00	71003469.52	71003469.52
1991	77396400.00	77396400.00	76659787.58	76659787.58
1992	81837088.00	81837088.00	82437725.60	82437725.60
1993	89202608.00	89202608.00	88761371.50	88761371.50
1994	94227992.00	94227992.00	94807496.51	94807496.51
1995	99641072.00	99641072.00	102167079.06	102167079.06
1996	106717200.00	106717200.00	109736845.11	109736845.11
1997	114991960.00	114991960.00	118907352.62	118907352.62
1998	131088104.00	131088104.00	130706985.90	130706985.90
1999	142058864.00	142058864.00	137744817.62	137744817.62
2000	158001040.00	158001040.00	154178049.02	154178049.02
2001	169793017.00	169793017.00	174614132.41	174614132.41
2002	177693280.00	177693280.00	175394603.34	175394603.34
2003	166626076.00	166626076.00	170343325.97	170343325.97
2004	199561713.00	199561713.00	196347258.50	196347258.50
2005	252524786.00	252524786.00	250643529.53	250643529.53
2006	283064779.00	283064779.00	284464302.35	284464302.35
2007	293306900.00	293306900.00	291137975.60	291137975.60
2008	316724548.00	316724548.00	315366394.24	315366394.24
2009	320000000.00	320000000.00	323263177.06	323263177.06
Total	3521322931.00		3473470527.00	
Average	146721788.79		157885023.95	
Minimum	0.00		60033478.17	
Maximum	320000000.00		323263177.06	

Forecast Data

Date	2.5 Lower	Forecast	Annual	97.5 Upper	97.5 Safety
2010	294068906.23	299507850.78	299507850.78	304946795.34	5438944.55
2011	287685909.75	294828566.36	294828566.36	301971222.97	5498796.85
2012	314722037.28	322879844.25	322879844.25	331037651.22	7266443.76
2013	326826209.94	335646902.38	335646902.38	344467594.83	7399209.98
Total		1252863163.78			
Average		313215790.94			
Minimum		294828566.36			
Maximum		335646902.38			

Sage Medium EcodotCom January 2009

Receipts - Local Income Tax



History
 Fitted values
 Historic interval
 Forecasts
 Forecast interval

Forecast Report for Receipts

Model Details

Dynamic regression

Regression(5 regressors, 1 lagged errors)

Term	Coefficient	Normalized	Elasticity	Std. Error	t-Statistic	Percentile
Personallnc[-1]	14357	0.6791	0.8565	967.3	14.84	1.000
Rate[-1]	68124234	0.2490	1.140	2547021	26.75	1.000
CapitalGains[-1]	0.03702	0.1098	0.07171	0.004131	8.961	1.000
_CONST	-867853765			976447151	-0.8888	0.6127
_TREND	349863	0.02671	4.429	490848	0.7128	0.5137
_AUTO[- 1]	-0.8512			0.1415	-6.014	1.000

Marked regressors are insignificant.

Within-Sample Statistics

Sample size	22	No. parameters	6
Mean	157885023.95	Std. deviation	85068566.02
R-square	1.00	Adj. R-square	1.00
Durbin-Watson	2.01	Ljung-Box(11)	8.6 P=0.34
Forecast error	3254001.60	BIC	4229841.08
MAPE	1.94%	RMSE	2775021.89

MAD 2439464.62

Variable specification test battery

Term	Test Value	Percentile
BusinessInc[-1]	0.001093	0.02637
PersonalInc[-2]	1.294	0.7446
Rate[-2]	0.4348	0.4903
CapitalGains[-2]	0.5791	0.5533

Variable specification tests successful.

Dynamics test battery

Term	Test Value	Percentile
Receipts[-1]	0.002581	0.04052
Receipts[-2]	0.9296	0.6650
_AUTO[-2]	0.3924	0.4689
Common factor test Chi Square(3)	2.071	0.4422

Dynamics tests successful.

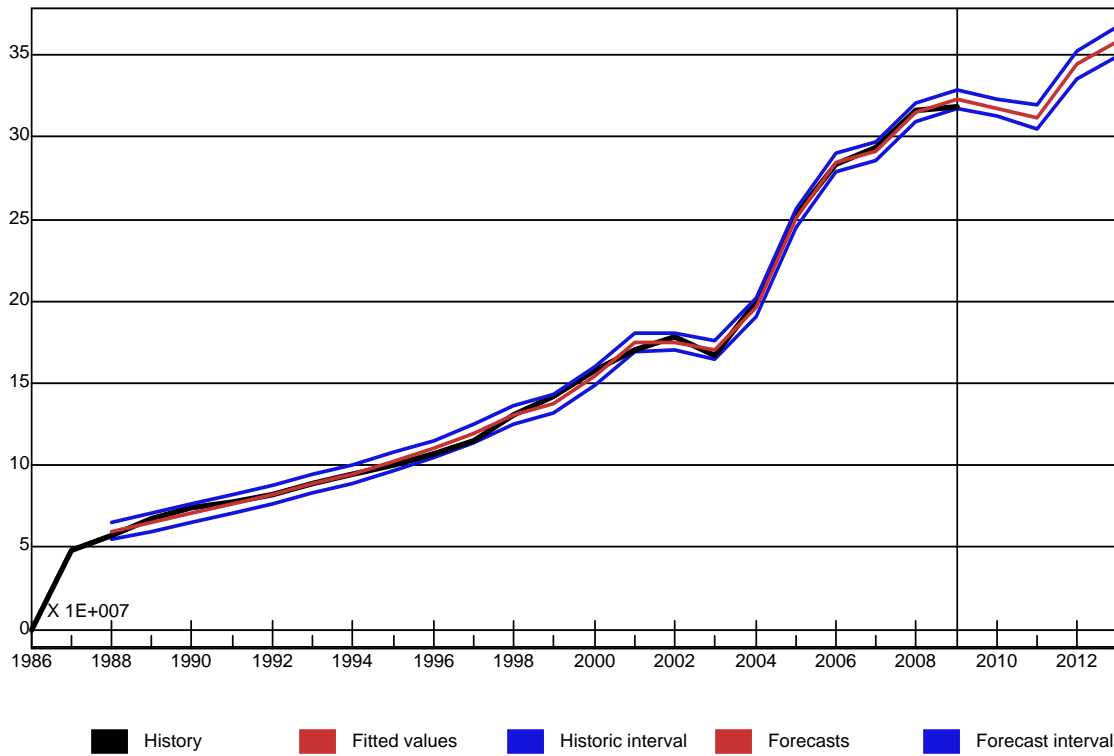
Historic Data

Date	Historic	Annual	Fitted	Annual
1986	0.00	0.00		
1987	47852404.00	47852404.00		
1988	57041620.00	57041620.00	60033478.17	60033478.17
1989	67600288.00	67600288.00	64751369.80	64751369.80
1990	74371192.00	74371192.00	71003469.52	71003469.52
1991	77396400.00	77396400.00	76659787.58	76659787.58
1992	81837088.00	81837088.00	82437725.60	82437725.60
1993	89202608.00	89202608.00	88761371.50	88761371.50
1994	94227992.00	94227992.00	94807496.51	94807496.51
1995	99641072.00	99641072.00	102167079.06	102167079.06
1996	106717200.00	106717200.00	109736845.11	109736845.11
1997	114991960.00	114991960.00	118907352.62	118907352.62
1998	131088104.00	131088104.00	130706985.90	130706985.90
1999	142058864.00	142058864.00	137744817.62	137744817.62
2000	158001040.00	158001040.00	154178049.02	154178049.02
2001	169793017.00	169793017.00	174614132.41	174614132.41
2002	177693280.00	177693280.00	175394603.34	175394603.34
2003	166626076.00	166626076.00	170343325.97	170343325.97
2004	199561713.00	199561713.00	196347258.50	196347258.50
2005	252524786.00	252524786.00	250643529.53	250643529.53
2006	283064779.00	283064779.00	284464302.35	284464302.35
2007	293306900.00	293306900.00	291137975.60	291137975.60
2008	316724548.00	316724548.00	315366394.24	315366394.24
2009	320000000.00	320000000.00	323263177.06	323263177.06
Total	3521322931.00		3473470527.00	
Average	146721788.79		157885023.95	
Minimum	0.00		60033478.17	
Maximum	320000000.00		323263177.06	

Forecast Data

Date	2.5 Lower	Forecast	Annual	97.5 Upper	97.5 Safety
2010	303958984.27	309397928.83	309397928.83	314836873.38	5438944.55
2011	297708386.28	304851042.89	304851042.89	311993699.50	5498796.85
2012	325248137.63	333405944.59	333405944.59	341563751.56	7266443.76
2013	337870914.42	346691606.86	346691606.86	355512299.30	7399209.98
Total		1294346523.17			
Average		323586630.79			
Minimum		304851042.89			
Maximum		346691606.86			

Sage High EcodotCom January 2009 Receipts - Local Income Tax



Forecast Report for Receipts

Model Details

Dynamic regression

Regression(6 regressors, 1 lagged errors)

Term	Coefficient	Normalized	Elasticity	Std. Error	t-Statistic	Percentile
Rate[-1]	68122300	0.2492	1.141	2839652	23.99	1.000
Personallnc[-1]	14267	0.6755	0.8514	1046	13.63	1.000
CapitalGains[-1]	0.03692	0.1096	0.07155	0.004354	8.481	1.000
_CONST	-933967962			1100307525	-0.8488	0.5907
_TREND	383238	0.02929	4.852	552972	0.6931	0.5011
Businesslnc[-1]	1.169	0.001340	0.001701	25.82	0.04527	0.03551
_AUTO[- 1]	-0.8560			0.1507	-5.679	1.000

Marked regressors are insignificant.

Within-Sample Statistics

Sample size	22	No. parameters	7
Mean	157839569.41	Std. deviation	84978037.51
R-square	1.00	Adj. R-square	1.00
Durbin-Watson	1.98	Ljung-Box(10)	8.4 P=0.41
Forecast error	3430793.14	BIC	4632293.49

MAPE	1.96%	RMSE	2832884.20
MAD	2492822.87		

Variable specification test battery

Term	Test Value	Percentile
Rate[-2]	0.5763	0.5522
PersonalInc[-2]	1.508	0.7805
CapitalGains[-2]	0.6631	0.5845
BusinessInc[-2]	2.139	0.8564

Variable specification tests successful.

Dynamics test battery

Term	Test Value	Percentile
Receipts[-1]	0.0001208	0.008770
Receipts[-2]	1.388	0.7613
_AUTO[-2]	0.5128	0.5261
Common factor test Chi Square(4)	5.280	0.7403

Dynamics tests successful.

Historic Data

Date	Historic	Annual	Fitted	Annual
1986	0.00	0.00		
1987	47852404.00	47852404.00		
1988	57041620.00	57041620.00	59958817.81	59958817.81
1989	67600288.00	67600288.00	64739263.18	64739263.18
1990	74371192.00	74371192.00	70978361.63	70978361.63
1991	77396400.00	77396400.00	76643855.30	76643855.30
1992	81837088.00	81837088.00	82472321.06	82472321.06
1993	89202608.00	89202608.00	88773618.99	88773618.99
1994	94227992.00	94227992.00	94792007.18	94792007.18
1995	99641072.00	99641072.00	102198582.43	102198582.43
1996	106717200.00	106717200.00	109832265.19	109832265.19
1997	114991960.00	114991960.00	119070463.45	119070463.45
1998	131088104.00	131088104.00	130855380.33	130855380.33
1999	142058864.00	142058864.00	137756717.51	137756717.51
2000	158001040.00	158001040.00	154131465.84	154131465.84
2001	169793017.00	169793017.00	174538894.37	174538894.37
2002	177693280.00	177693280.00	175334603.04	175334603.04
2003	166626076.00	166626076.00	170252020.05	170252020.05
2004	199561713.00	199561713.00	196365379.73	196365379.73
2005	252524786.00	252524786.00	250501820.47	250501820.47
2006	283064779.00	283064779.00	284388112.31	284388112.31
2007	293306900.00	293306900.00	290939842.70	290939842.70
2008	316724548.00	316724548.00	315088362.75	315088362.75
2009	319000000.00	319000000.00	322858371.68	322858371.68
Total	3520322931.00		3472470527.00	
Average	146680122.13		157839569.41	
Minimum	0.00		59958817.81	
Maximum	319000000.00		322858371.68	

Forecast Data

Date	2.5 Lower	Forecast	Annual	97.5 Upper	97.5 Safety
2010	312311915.55	317864268.19	317864268.19	323416620.84	5552352.64
2011	304856245.20	312164854.15	312164854.15	319473463.11	5609655.48
2012	335780047.16	344144534.26	344144534.26	352509021.36	7427221.52
2013	349598488.78	358658813.27	358658813.27	367719137.76	7555384.27
Total		1332832469.88			
Average		333208117.47			
Minimum		312164854.15			
Maximum		358658813.27			