

# Toledo Income Tax Revenue:

## Forecast 2002

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## *Executive Summary*

The 10-year U.S. economic expansion ended March 2001. For most of this year, therefore, the national economy experienced its 10<sup>th</sup> recession since the end of World War II. A direct consequence for the City of Toledo is the **first drop in income tax revenue following a 9-year run of continuous growth at a rate of 4.4% per year.**

Our quarterly forecast for 2001 shows total income tax revenue **down about \$2,931,264** from 2000. That 1.9% drop is the largest decline since 1991, when the City lost more than \$3 million in income tax revenue. In short, 2001 turned out to be a recession year for Toledo, but the local slump is relatively mild so far. Our forecast to City Council a year ago raised a concern about a turn in income tax revenue from rapid growth in 2000 to a decline in 2001 due to deteriorating economic conditions. That forecast was too optimistic, however, because economic conditions deteriorated more than expected as the year progressed. The terrorist attack on September 11 was a negative shock that compounded developing economic weakness; significant declines in business and consumer confidence reflected that weakness. For 2002, we do not expect a return to the boom conditions of the late-1990s. Recovery seems imminent next year, but a turnaround is likely to be slow at best in the Toledo area.

The tabulation below shows Toledo's income tax revenue since 1998, including the forecast for 2001 and 2002. During the recession of 2001, the City's total income tax revenue falls almost 2% due to declines in tax withholding and revenue from business profits, both associated with the local slump. The forecast also reveals recovery for withholding and business profits tax revenue in 2002 that will contribute to a small increase in the City's total income tax revenue. **The predicted slight recovery fails to generate revenue equal to the high experienced by the City in 2000.** Moreover, significant downside risks exist because of great uncertainty about the length and depth of this recession; at the present time, they impose negative threats to the City's revenue growth next year.

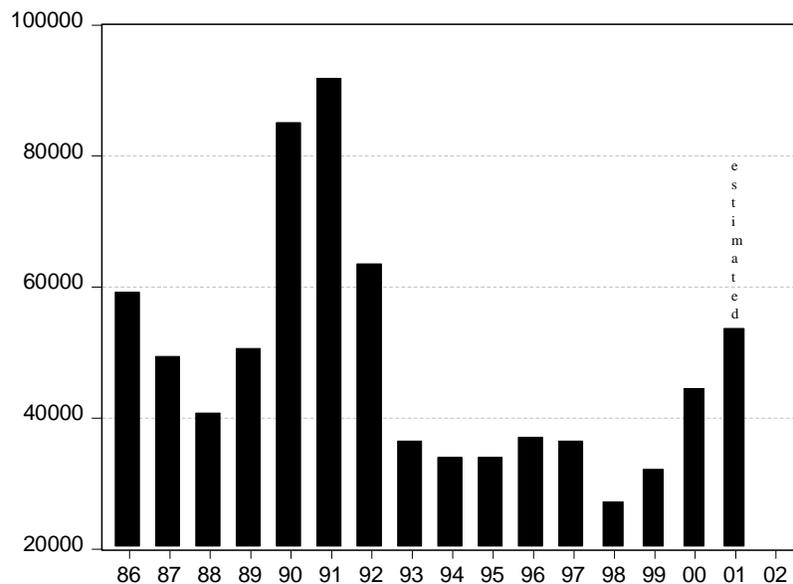
Toledo Income Taxes - Forecasts are <b>bold</b> .								
	Withholding	Percent change	Business	Percent change	Individual	Percent change	Total	Percent change
1998	125,178,347	1.3	15,904,590	0.3	3,421,660	4.2	144,504,597	1.3
1999	130,843,903	4.5	15,645,820	-1.6	3,680,593	7.6	150,170,316	3.9
2000	134,806,279	3.0	15,287,726	-2.3	3,736,243	1.5	153,830,248	2.4
2001	<b>133,647,474</b>	<b>-0.9</b>	<b>13,102,910</b>	<b>-14.3</b>	<b>4,148,600</b>	<b>11.0</b>	<b>150,898,984</b>	<b>-1.9</b>
2002	<b>134,367,118</b>	<b>0.5</b>	<b>15,017,921</b>	<b>14.6</b>	<b>3,772,123</b>	<b>-9.1</b>	<b>153,157,162</b>	<b>1.5</b>

## A. Economic Conditions

The National Bureau of Economic Research (NBER) declared that the U.S. economy began its 10<sup>th</sup> recession since World War II in April 2001, after a long 10-year economic expansion. This year has been marked by declines in industrial production, employment, and stock prices, accompanied by layoffs and a moderate run-up in the nation's unemployment rate. Real Gross Domestic Product (GDP) fell at an annual rate of 1.1% during the third quarter; it's expected to drop again in the fourth quarter of this year. So far, however, the national and local recessions appear mild compared to past experiences.

Recession conditions were observed in the Toledo area a year ago. Figure 1 shows the run-up in local initial claims last year. Increases in claims filed locally represented an early warning of weakness in employment conditions here, with potential adverse consequences for the City's tax revenue in 2001. The rise in claims for unemployment insurance in the last three years looks similar to Toledo's experience a decade ago, except the magnitude is smaller this time.

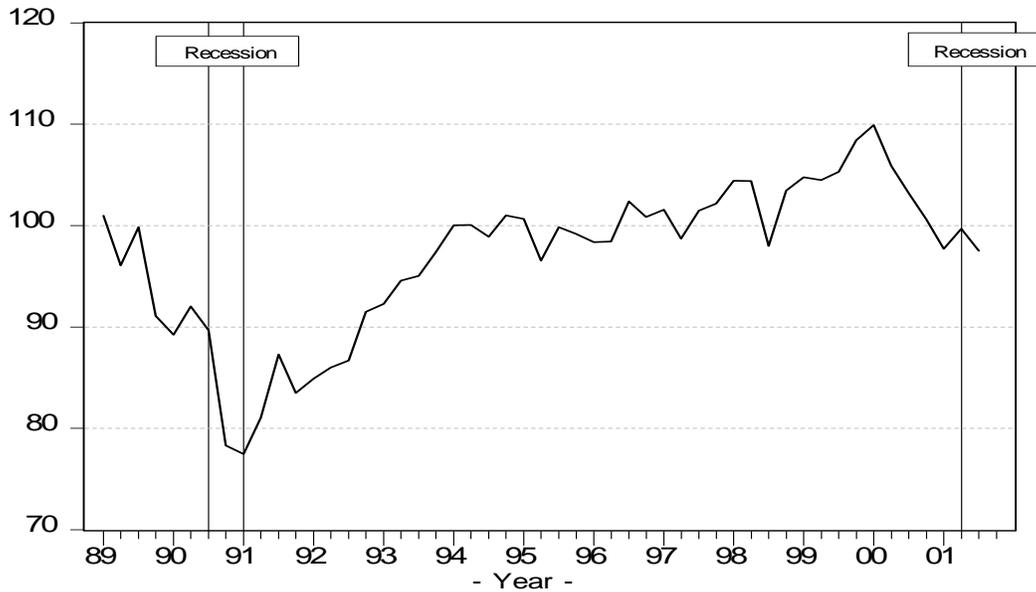
Figure 1: Initial Claims for Unemployment Insurance



Source: Ohio Bureau of Labor Market Information.

The Toledo index of leading indicators summarizes economic conditions locally. Figure 2 shows that the index recorded its fifth decline over the last six quarters during the third quarter of 2001. A year ago the index was signaling the onset of a local slump. It is now at its lowest level since the spring of 1995, and a recession is underway.

Figure 2: Toledo Index of Leading Indicators (1996=100)



Source: Paul J. Kozlowski, College of Business Administration, The University of Toledo.

The third-quarter decline resulted from unfavorable movements in five of six indicators in the Toledo index. Initial claims for unemployment insurance jumped 7.3% during the summer months as layoffs at local businesses mounted. Local residential construction, authorized by building permit, dropped 22.7%, and new orders to local manufacturers fell 46.4%. The only favorable change was the slight increase in the average workweek in local manufacturing businesses, but hours worked in the Toledo area are still below highs recorded several years ago. The national components of the Toledo index also moved down during the summer. The University of Michigan's index of consumer sentiment declined; it has slipped about 18% since early-2000. Sales of light vehicles slipped during the third quarter, although they remained at an annual rate of about 16 million; that is, nevertheless, below highs recorded in early-2000.

The ongoing recession will produce conditions that are similar and different from past episodes. The major similarity with the previous local slumps is that the economic situation for 2002 is not shaping up as one in which the City can expect income tax revenue to grow at close to its long-term trend. Differences are likely to occur in how this recession plays out, especially the great uncertainty about its length and depth which the terrorist attack of September 11 compounded. In short, 2001 turned out to be a recession year for Toledo, but so far the slump is relatively mild here and nationwide. That does not guarantee a strong rebound in 2002, however.

## B. Forecast 2001

In our forecast to City Council in March, we predicted a 0.7% decrease in total income tax revenue for this year. The decrease was expected to result from a predicted falloff of 0.6% in tax withholdings, which account for about 88% of the City's income tax revenue, and a drop of 1.3% in combined tax revenue from business profits and individual direct payments. This forecast was too optimistic, however. Based on information available through the third quarter of 2001, our dynamic quarterly forecast procedure (DQF) predicts a drop in total income tax revenue of 1.9% for this year. The major contributors are declines of 0.9% in tax withholdings and 14.3% in tax revenue from business profits. **For 2001, the DQF shows a loss in total income tax revenue of \$2,931,264.** That is the biggest dollar loss in the City's income tax revenue since 1991 when revenue fell \$3,109,795.

Our forecast for the fourth quarter of 2001 uses updates based on the most recent data available through November 2001. Table 1 below shows the quarterly income tax revenue from withholdings generated by the Dynamic Quarterly Forecast (DQF) procedures that account for long-term trend, business cycle, and seasonal movements in the City's revenue data. The DQF forecast for tax withholdings is close to that arrived at independently by the City's Finance Department using different procedures. The results in Table 1 suggest strongly that the City can expect a loss of withholding revenue close to 1% this year, which translates to approximately \$1,348,063.

Table 1: Toledo Quarterly Income Taxes – DQF forecasts are **bold**.

	Withholding (sa)	Seasonal Index	Re-Seasonalized	Withholding (nsa)	Annual Percent Change	City Finance Department	Annual Percent Change
2001 1				32,387,186			
2				33,212,051			
3				32,469,838			
4	<b>33,792,916</b>	1.052836	<b>35,578,399</b>	<b>35,578,399</b>		35,239,885	
Annual				<b>133,647,474</b>	<b>-0.9</b>	133,308,960	-1.1

Notes: sa = seasonally adjusted; nsa = not seasonally adjusted.

Forecasts in bold were generated by the DQF procedure outlined to City Council in *City of Toledo Payroll Tax Revenue: Annual Budget Projections and Long-term Trends*, UT-Urban Affairs Center, October 2000.

Table 2 shows the City's total income tax revenue. The DQF predicts a 1.9% decrease in total income tax revenue, a loss of almost \$3,000,000 for the City from the \$153,830,248 received in 2000. Our forecast for 2001 is close to the projection from City's Finance Department (November 15), but we are a little more pessimistic about this year (-1.9% vs. -1.5%). The important point here is that both forecast procedures reveal the negative impact of the recession on the City's income tax revenue.

Table 2: Toledo Quarterly Income Taxes – DQF forecasts are **bold**.

	Withholding (nsa)	Business Profits(nsa)	Individual Direct Pays(nsa)	Total (nsa)	Annual Percent Change	City Finance Department	Annual Percent Change
2000	134,806,279	15,287,726	3,736,243	153,830,248	+2.6		
2001 1				36,466,934			
2				41,404,893			
3				35,522,923			
4	<b>35,578,399</b>	<b>1,295,011</b>	<b>430,824</b>	<b>37,304,234</b>		35,522,923	
Annual	<b>133,647,474</b>	<b>13,102,910</b>	<b>4,148,600</b>	<b>150,898,984</b>	<b>-1.9</b>	151,480,153	-1.5

Notes: sa = seasonally adjusted; nsa = not seasonally adjusted.

Forecasts in bold were generated by the DQF procedure outlined to City Council in *City of Toledo Payroll Tax Revenue: Annual Budget Projections and Long-term Trends*, UT-Urban Affairs Center, October 2000.

Our predicted decline in total income tax revenue this year results from the loss of just over \$1,000,000 from tax withholding, just over \$2,000,000 from business profits tax revenue, and a gain of nearly \$500,000 from individual direct income tax payments. The increase in individual direct payments results from special factors in the collection process, which offset the impact of the recession. The decline in revenue from business profits is consistent with recession conditions here. This year's fall in revenue from business profits is the fourth drop from that source in the last five years. The recession has, therefore, compounded a problem of no growth from this source of City revenue since the mid-1990's.

Revenue from tax withholding and business profits is sensitive to the state of the local economy; DQF accounts for that through initial claims for unemployment insurance. The rise in UI claims in 2000 and 2001 has a negative impact on the City's total tax revenue. **This year's decline in revenue from withholding and business profits results directly from the local slump predicted last year.**

## C. Forecast 2002

Table 3 shows the City's actual tax revenue from 1989 to 2000 and our forecasts for 2001 and 2002. The forecast procedures (DQF-dynamic quarterly forecast and LIM-leading indicator model), outlined in the *City of Toledo Payroll Tax Revenue: Annual Budget Projections and Long-term Trends*, UT-Urban Affairs Center, October 2000, predict a slight recovery in income tax revenue during 2002. Total income tax revenue collected is not expected to regain the high of \$153,830,248 that the City experienced in 2000. Our forecast indicates that in 2002 the City will experience its second year below that peak.

Table 3: Toledo Income Taxes - Forecasts are **bold**.

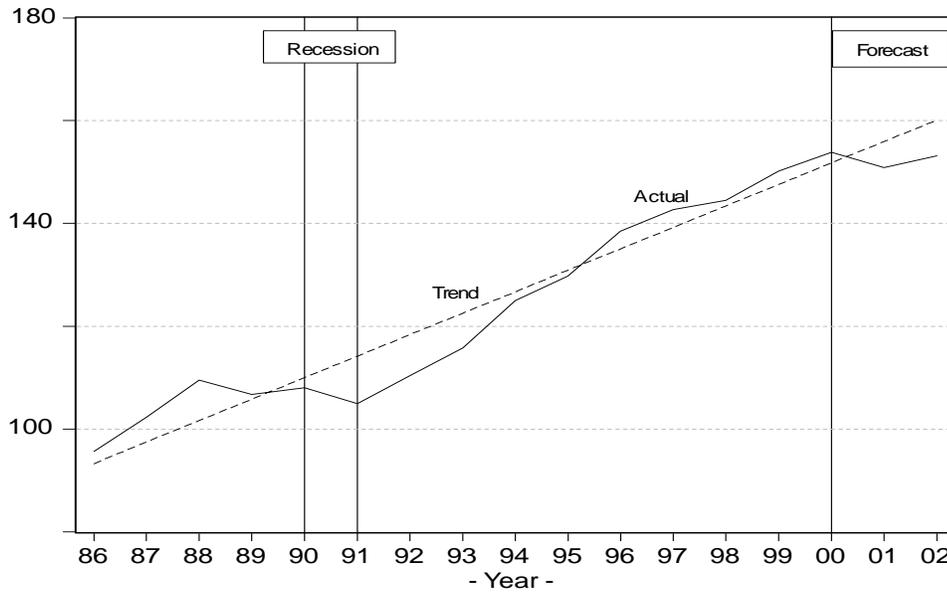
		%		%		%		%
	Withholding	change	Business	change	Individual	change	Total	change
1989	\$95,011,996	2.4	\$9,292,927	-35.0	\$2,396,757	-2.4	\$106,701,680	-2.6
1990	92,919,354	-2.2	12,766,213	37.4	2,294,258	-4.3	107,979,825	1.2
1991	92,452,379	-0.5	9,963,000	-22.0	2,454,651	7.0	104,870,030	-2.9
1992	97,428,524	5.4	10,445,009	4.8	2,549,443	3.9	110,422,976	5.3
1993	100,159,047	2.8	12,805,217	22.6	2,790,750	9.5	115,755,014	4.8
1994	107,147,988	7.0	14,813,612	15.7	3,013,485	8.0	124,975,085	8.0
1995	112,883,989	5.4	13,743,551	-7.2	3,161,220	4.9	129,788,760	3.9
1996	117,494,951	4.1	17,829,958	29.7	3,161,798	0.0	138,486,707	6.7
1997	123,559,489	5.2	15,856,452	-11.1	3,284,787	3.9	142,700,728	3.0
1998	125,178,347	1.3	15,904,590	0.3	3,421,660	4.2	144,504,597	1.3
1999	130,843,903	4.5	15,645,820	-1.6	3,680,593	7.6	150,170,316	3.9
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2002	<b>134,367,118</b>	<b>0.5</b>	<b>15,017,921</b>	<b>14.6</b>	<b>3,772,123</b>	<b>-9.1</b>	<b>153,157,162</b>	<b>1.5</b>

Source: Actual revenue from City of Toledo, Finance Department/Treasury Division.

Forecasts in bold were generated by the procedures outlined to City Council in *City of Toledo Payroll Tax Revenue: Annual Budget Projections and Long-term Trends*, UT-Urban Affairs Center, October 2000.

None of the three categories of the City's income tax revenue recovers to recent highs, however. For 2002, the forecast shows a slight recovery of 0.5% in tax withholdings. That's a positive factor for next year, because withholdings account for nearly 89% of the City's total income tax revenue. It is also important to note that there has been no growth in income tax revenue from business profits since 1996 when revenue amounted to \$17,829,958. Declines have occurred in four of the last five years. The larger predicted drop of 14.3% this year is consistent with the ongoing recession here, but even with a predicted turnaround next year our forecast shows revenue from business profits almost \$3,000,000 below the 1996 level.

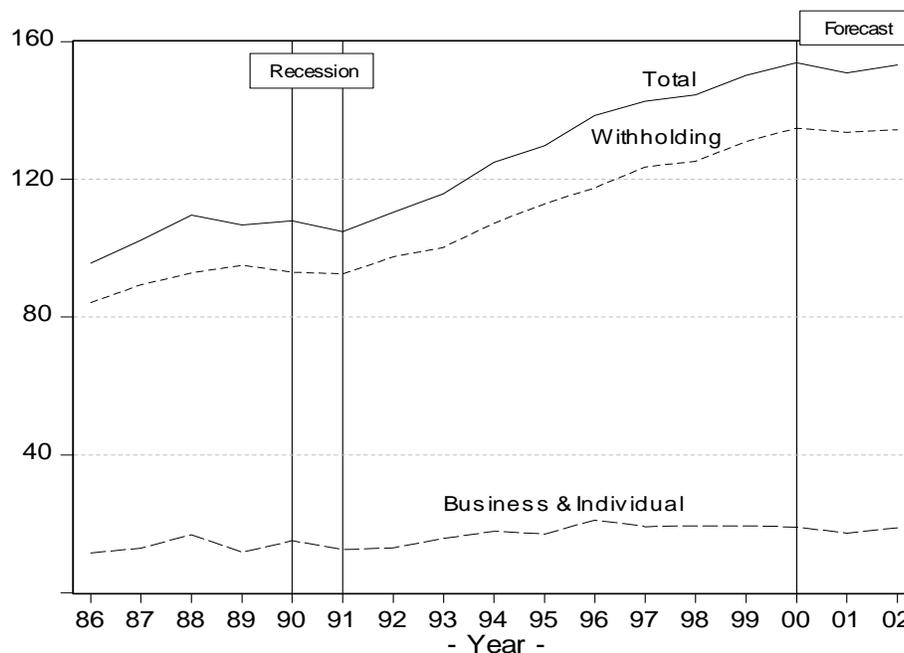
Figure 3: Total Income Tax Revenue (millions)



Source: City of Toledo, Finance Department/Treasury Division and UT-Urban Affairs Center.

Figure 3 illustrates the City’s income tax revenue performance since 1986. Our forecast puts total income tax revenue below its long-term trend growth of 3.4% for 2001 and 2002. Revenue below trend is a characteristic of recessions in Toledo. So far the City’s slump has been relatively mild but, as Figure 3 shows, it takes time for income tax revenue to recover. During the recession a decade ago the City’s revenue did not move above the 1988 peak until 1992. A short, mild national recession, followed by a strong recovery next year, will move the City’s income tax revenue close to its 2000 level. At this time, however, our forecast puts revenue in 2002 just short of the \$153,898,984 collected in 2000. If the City’s income tax revenue grew at its long-term trend, then revenue for 2002 would be about \$7,000,000 higher than our predicted \$153,157,162. **Combining 2001 and 2002, the forecast reveals a loss of income tax revenue of about \$10,000,000; this loss is the direct consequence of the ongoing recession that seems likely to extend into next year.**

Figure 4: Income Tax Categories (millions)



Source: City of Toledo, Finance Department/Treasury Division and UT-Urban Affairs Center.

Figure 4 shows that even with a mild recovery in 2002, income tax collections do not recover fully. The City is caught in a slump that is beyond its control and, as in past episodes, the City's revenue suffers short-run losses associated with weakness in employment conditions. On the positive side, employment in the Toledo metropolitan area has decreased only about 0.5% compared to more than 7% in the recession a decade ago. Moreover, local manufacturing employment fell 19% from 1985 to 1991, but it has decreased about 5.5% during 2000 and 2001. Thus, while employment declines contributed significantly to the City's loss of income tax revenue this year, the impacts so far have been milder than those experienced a decade ago.

#### **Downside Risks-2002**

The major risks to the forecast are further negative shocks to the City's economy.

- ✓ Terror/War/Uncertainty that pulls down consumer and business confidence.
- ✓ A national recession that is longer and deeper than average.
- ✓ A global recession that has more negative impacts on manufacturing.
- ✓ A sluggish recovery in employment and income in the Great Lakes States during 2002.

#### **Upside Impacts-2002**

Some favorable factors may limit further deterioration or boost recovery in revenue.

- A short, mild national recession followed by a strong recovery.
- Startup of special local construction projects.
- No further severe financial problems for the City's major employers.