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Staff Paper

A Review of Municipal Bond Issues in Michigan

by

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Staff Paper 2011-01

January 2011



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Abstract

Municipal bonds have recently been of national interest and Michigan's strained economy over the past decade has made bond issuance in the state of particular interest to a variety of stakeholders.

Given the close connection between municipal bonds and property taxes, the fall-off in the housing market has placed significant strain on bonds within the state. This paper reviews the Michigan municipal bond condition and develops a new debt assessment indicator system. This system was tested using over 700 Michigan local governments. Based on this indicator system, a number of communities are experiencing significant fiscal stress. However, further examination reveals that at least some of these communities have in place short term plans to address such stress. Most importantly, the report notes that data deficiencies make it difficult to assess the true level of stress and risk in the Michigan municipal bond market.

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INTRODUCTION

This working paper addresses one of the potential implications of the Great Recession of 2008-09 on public finances in Michigan. Specifically, it assesses the impact of the housing crisis and subsequent fall in property taxes, user fees, and special assessment revenue on municipal debt within the state. These values, which in many places have dropped by 10.0% to 30.0% or more, are the basis upon which much of the local government revenue base is predicated.

Besides funding for operations, falling revenue streams from property taxes, user fees, and special assessment revenue are the foundation for much of the municipal bond repayment system. Michigan governments issue debt for a variety of purposes. The most common purpose is for infrastructure such as water and sewer systems and roads. Other uses of debt include new facilities, capital equipment, and, in some rare cases, operating expenses and accumulated deficits. Some of this debt is issued on the basis of special assessment revenue and related fees.

Michigan local governments, in the past decade have issued hundreds of millions of dollars water- and sewer-related bonded debt. Many of these bonds were for existing residential or commercial areas and were used to provide necessary infrastructure services. In some cases, this debt was issued on a more proactive basis to provide infrastructure for areas that were expecting growth. However, this growth sometimes did not occur and governments were left with debt that did not pay off.

While the whole of Michigan did not fully participate in the national housing bubble, some parts of the state did experience growth prior to the housing downturn that caused them to experience the recession more strongly than other localities. This growth occurred in counties and local areas such as Livingston County, Washtenaw County, Clinton County, Grand Traverse County, and parts of Oakland and Genesee counties. In many of these areas, necessary infrastructure was lacking for residential developments. This infrastructure included roads, water and sewer lines as well as other utilities. Local governments, in conjunction with developers, issued debt including special assessment debt to finance this required infrastructure.

As the financial and mortgage crisis unfolded in 2007 and 2008, housing and construction sectors collapsed in an unprecedented fashion. Many communities, who were expecting tap fees or special assessment fees to cover infrastructure debt payments, faced developer bankruptcies, lack of revenue and empty developments.

The full extent of Michigan municipal bond debt service stress, particularly those related to special assessment debt, is unknown. The rating agencies offer one way of assessing the risk of municipal default. However, these ratings are not perfect and a further investigation is warranted in assessing the situation. This paper attempts to assess the fiscal stress facing local governments who have issued debt; especially special assessment debt in the last decade. It also offers discussion of the potential policy options to address this stress.

This paper is the result of a task force created originally by the Senate Fiscal Agency, which is now being directed by Michigan State University. As part of this task force the Michigan Government Finance Officers Association oversaw the testing and development of the debt stress indicator system and the Municipal Advisory Council of Michigan provided critical information and advice on local government bonded debt.

MUNICIPAL BOND BACKGROUND

Many governments look to outside investment to help finance capital investments because such projects require a large amount of capital up front yet have benefits streams for years into the future. Debt such as this allows future generations who will benefit from the investment to help to pay for it over time. Many governments would not be able to make capital investments without such funding.

Debt is by far the most prevalent form of capital financing for public sector institutions. In the United States, the most common form of debt financing is through bonds which are debt obligations issued by states, cities, counties, and other governmental entities, which traditionally use the money

to build schools, highways, hospitals, sewer systems, and many other projects for the public good.¹ Michigan local governments cannot borrow money except for public purposes as expressly authorized by law. This section discusses the history and current status of municipal bonds in the United States and in Michigan in particular.

Types of Municipal Bonds

There are two main types of municipal bonds: general obligation bonds and revenue bonds. The first, general obligation bonds are those that are backed by the full faith and credit of the issuing government. General obligation bonds can be further delineated into unlimited tax obligation bonds and limited tax obligation bonds. Unlimited tax general obligation bonds are secured by the issuer's taxing power as limited by statute and constitutional law. These types of unlimited obligation bonds are generally approved by the electorate and can be repaid using any general source of revenue available to the municipality. Limited tax general obligation bonds are those that are secured by limited taxing powers -- limited to certain revenue sources and maximum property-tax millage amounts.²

The second type of municipal bonds, revenue bonds, are issued for either project or enterprise financings in which the bond issuers pledge to the bondholders the revenues generated by the operating projects financed. They can include airport revenue bonds, college and university revenue bonds, hospital revenue bonds, public power revenue bonds, and many more.³

Bonds backed by property taxes may be at risk of default since the bursting of the housing bubble in 2007 when property taxes, the main source of revenue for most Michigan local governments, plummeted. There is a small probability that such a default could lead to municipal bankruptcy and possible contagion into other municipal bonds on the market. Although it is unlikely that either of these events will occur en masse, it is important to understand the process of and risks associated with these bonds in order to prevent defaults from occurring.

¹ SIFMA, 2010

² VerBurg, 2007

³ VerBurg, 2007

Historical Overview on Municipal Bonds

Municipal bonds have been around for most of the nation's history. General obligation bonds were the most prevalent type of bonds in the market in the early stages of bond issuance, which has been far outpaced by revenue bonds in more recent times. In addition, early bond investment was dominated by institutional investors but now is dominated by individual investors.⁴

Municipal bonds have traditionally, with a few exceptions, been a safe investment. According to Moody's Investors' Service, the 10-year cumulative default rate on municipal bonds was 0.04% between 1970 and 2009 compared with 9.83% which was the 10-year default rate for corporate bonds over the same period. However, the current recession has brought new stresses to this market and may affect the safety of these bonds.⁵ A study by Fitch found that cumulative default rates were only 0.24%. More importantly, in almost any case of default, investor recovery rates were very high, often 100%, compared with bond defaults in the private sector. In the case of the Orange County bankruptcy for example, investors had a 100% recovery rate after 18 months⁶.

There have been four periods where municipal bond default rates were significantly higher than historical averages. These periods correspond to four of the nation's worst economic recessions including 1837-1843, 1873-1879, 1893-1899, and 1929-1937 (Cohen, 1989). During these recessions, municipal bonds did go into default, although this still remains relatively rare in general. The 1830s recession left over one half of municipal bonds in default. Because of these problems, many states began restricting their own borrowing activity. During the latter half of the 1800s, municipalities began to be the primary issuers of debt. In the second half of the 19th century, the two major economic recessions resulted in nearly a quarter of municipal bonds being in default at different times.

Finally, the Great Depression led to a wave of municipal defaults. During the economic boom of the 1920s, much like today, there was a major housing bubble in urban areas. From 1900 to 1930,

⁴ Fahim, 2010

⁵ Fahim, 2010

⁶ Fitch Ratings, 2007

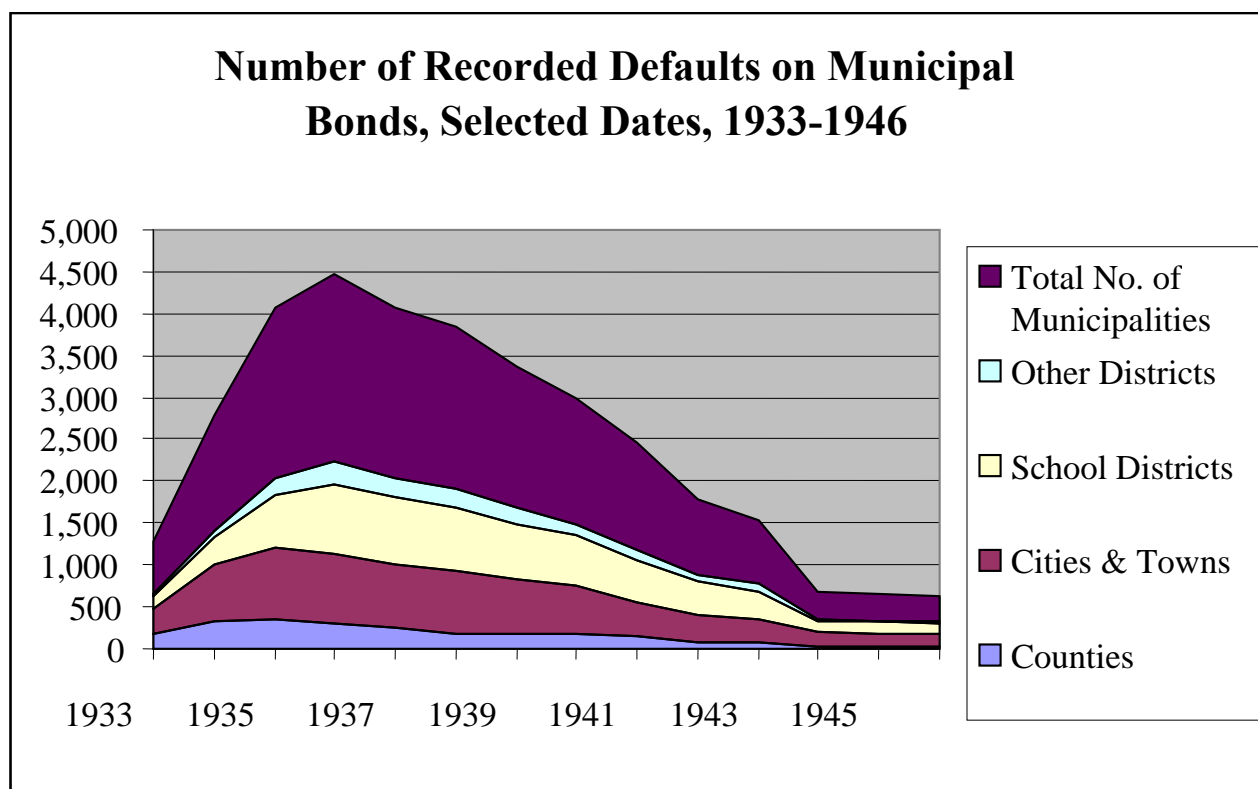
Detroit's population grew from 300,000 to over 1.3 million due to growth in the auto industry (Cohen, 1989). In order to accommodate this growth, large parts of the city of Detroit and surrounding suburban communities issued special assessment and other forms of debt to pay for infrastructure. For example, the City of Detroit incurred special assessment revenue of \$1.0 million in 1910, but this number jumped to over \$20.0 million by 1928. Especially, during the 1920s, Lansing, Saginaw, Flint, and other cities engaged heavily in public improvements using special assessments. Much of these special assessments were based on speculative improvements tied to proposed residential development. These residential development plans were spurred by the widespread advent of the automobile. The City Auditor of Flint in 1925 raised the alarm that many special assessments were being laid against vacant land which would not likely have the ability to pay.

In Detroit in 1936, a legislative subcommittee found that just within the city of Detroit, there were 250,000 vacant lots that had been proposed for development in the 1920s. Many of these lots had special assessments placed against them for public infrastructure and much of this special assessment had been the secured revenue source for the debt issued by the City. Following the 1929 stock market collapse, much of this debt went bad and Michigan had the highest amount of municipal defaults of any state (Cohen, 1989).

The peak of local government bond defaults after the Great Depression did not occur until 1937 – eight years after the stock market crash, as can be seen in [Figure 1](#).⁷ If the same timeline occurs during this recession, the peak of current bond defaults may not occur until 2015.

⁷ United States Advisory Commission on Intergovernmental Relations, 2010

Figure 1



Source: United States Advisory Commission on Intergovernmental Relations, 2010

Regional borrowing behavior during the boom years preceding a recession is believed to determine which regions will be most severely affected by the recession.⁸ In 2006-07, Michigan ranked 9th in terms of highest state and local government long term debt and 15th in terms of highest state and local government long-term debt per capita.⁹ It is also possible that safeguards put in place since the Great Depression will prevent major problems from occurring during this economic crisis.

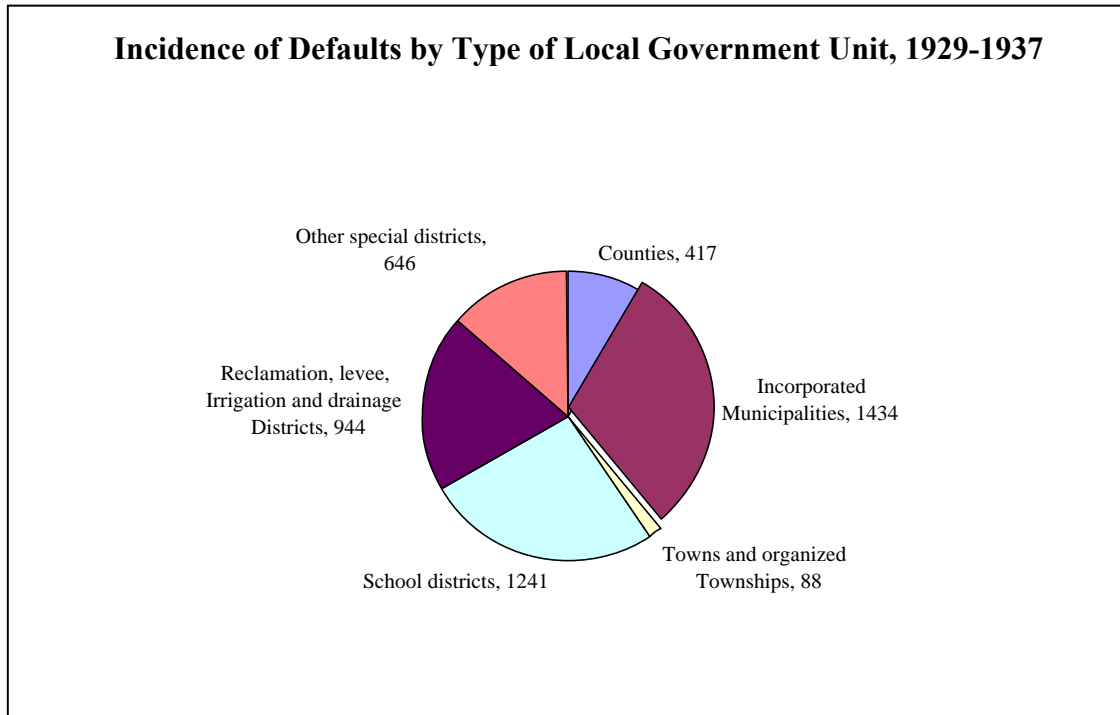
However, not all types of bonds are as likely to default as others. Figure 2 gives a breakdown of incidence of defaults by type of local governmental unit from 1929-1937. During this period, municipalities and school districts were the most likely to default. However, it is believed that

⁸ Cohen, 1989

⁹ U.S. Census Bureau, 2010

during the current crisis that special assessments will be the most likely to default, particularly those that were created to fund housing and commercial development projects.

Figure 2



Data Source: United States Advisory Commission on Intergovernmental Relations

In the wake of the problems of the Great Depression, states began much more rigorously overseeing municipal debt. This included debt restrictions, debt approval and voter approval for many issues. These legal frameworks (and further restrictions to follow) helped the default rate on bonds to not exceed 1.1% from 1940 to 1999.¹⁰ In fact, since the 1950s, Michigan has had only one general purpose government default on a bond issue. The only known default was a water bond issue in 1960 that was defaulted on by Muskegon Township¹¹.

¹⁰ Fahim, 2010

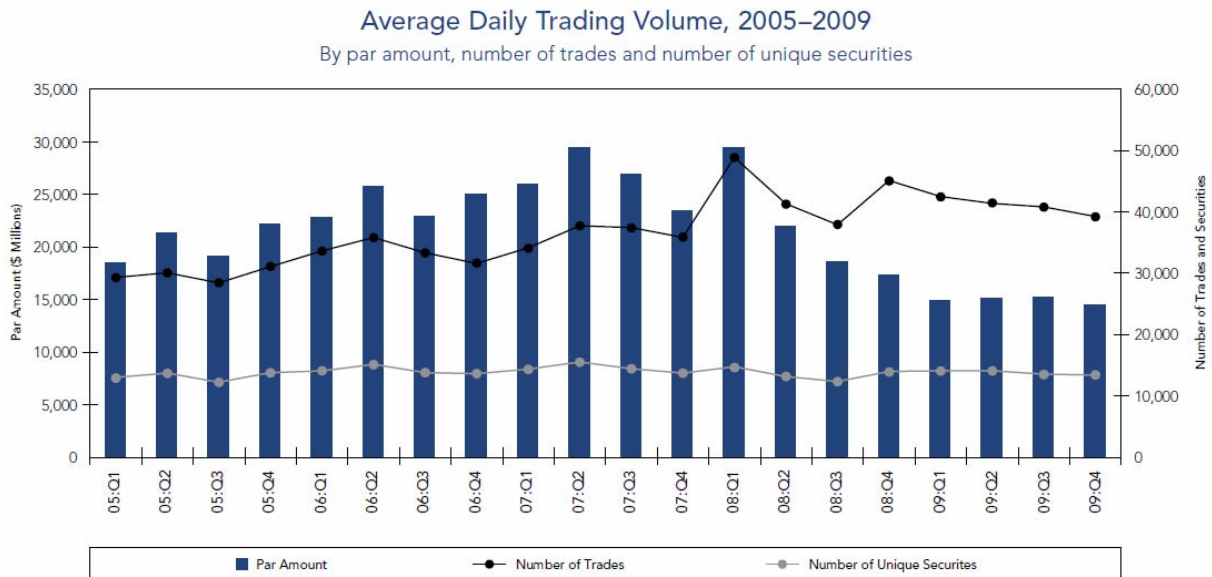
Following the Great Depression, Act 202 of the Public Acts of 1943, which was in part due to the number of defaults that occurred in Michigan, was enacted. Public Act 202 of 1943 regulated the issuance of debt by requiring that debt be approved by the Municipal Finance Commission which in its original form consisted of the Attorney General, the Superintendent of Public Instruction, the State Treasurer, and the Auditor General. In addition to a fairly rigorous application process by the Municipal Finance Commission's staff, the Attorney General's Office also reviewed the application for legal compliance with the authorizing statute. While some viewed this process as burdensome, it played a potentially important role in reducing the potentiality of municipal default.

Current Municipal Bond Status

Faith in municipal bonds has fluctuated during the course of the current recession, and some cities are being downgraded by rating agencies due to fiscal stress.¹² Municipal bonds were particularly depressed at the end of 2008, which can be seen in Figure 3.

¹¹ Courtesy of Joel Piell, Miller Canfield and Michael Alandt Municipal Advisory Council of Michigan

Figure 3

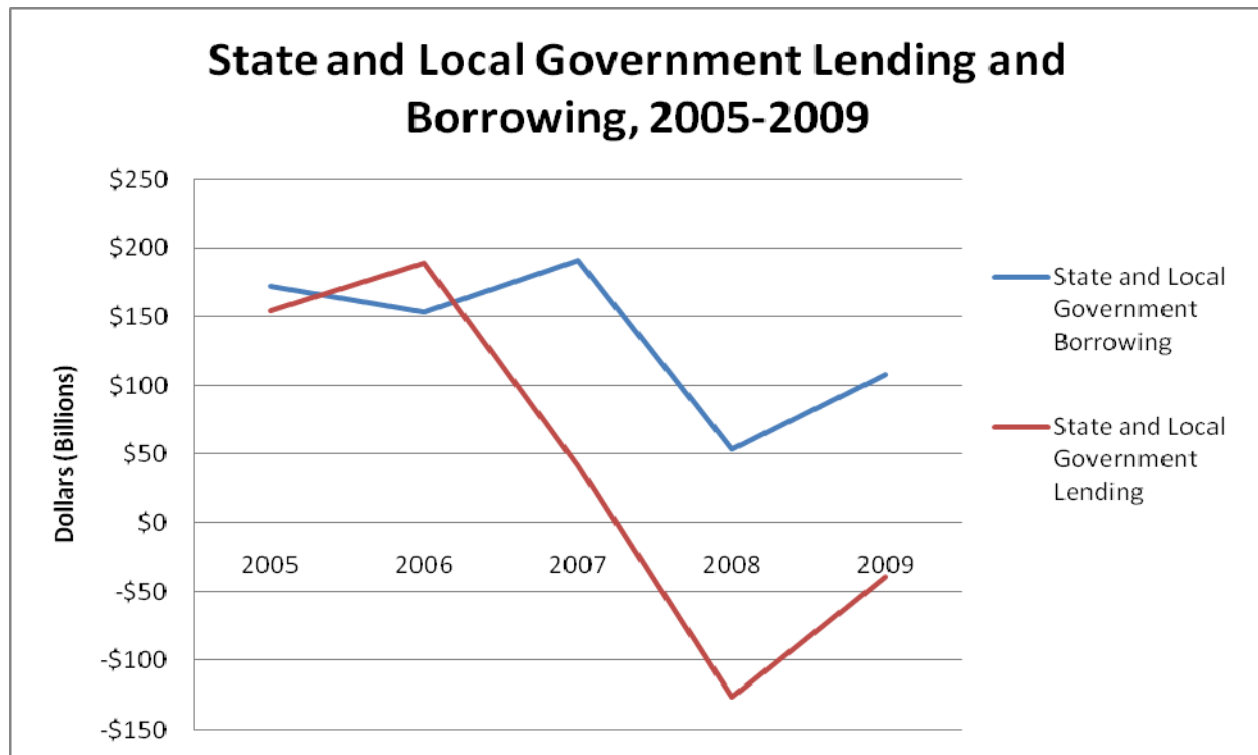


Source: MSRB, 2009

The decrease in municipal bond trades and par value can also be seen in state and local government lending and borrowing in the following three figures which show state and local government lending and borrowing in total, then net lending (borrowing) broken down into state government and local government. As can be seen in [Figure 4](#), state government borrowing increased drastically during the recession of the early 2000s, and has increased during the Great Recession as well. [Figure 5](#) demonstrates that local government borrowing never recovered from the recession of the early 2000s, and is headed even further down during the current recession.

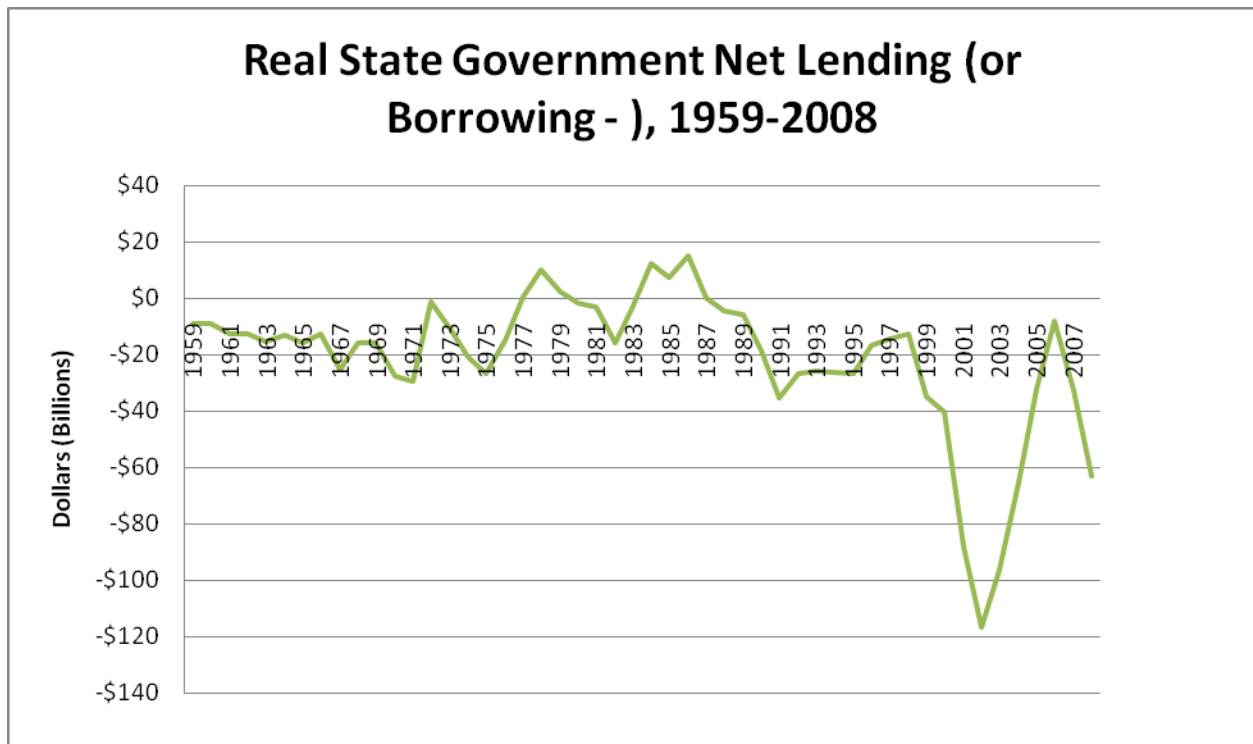
¹² The Bond Buyer, 2010

Figure 4



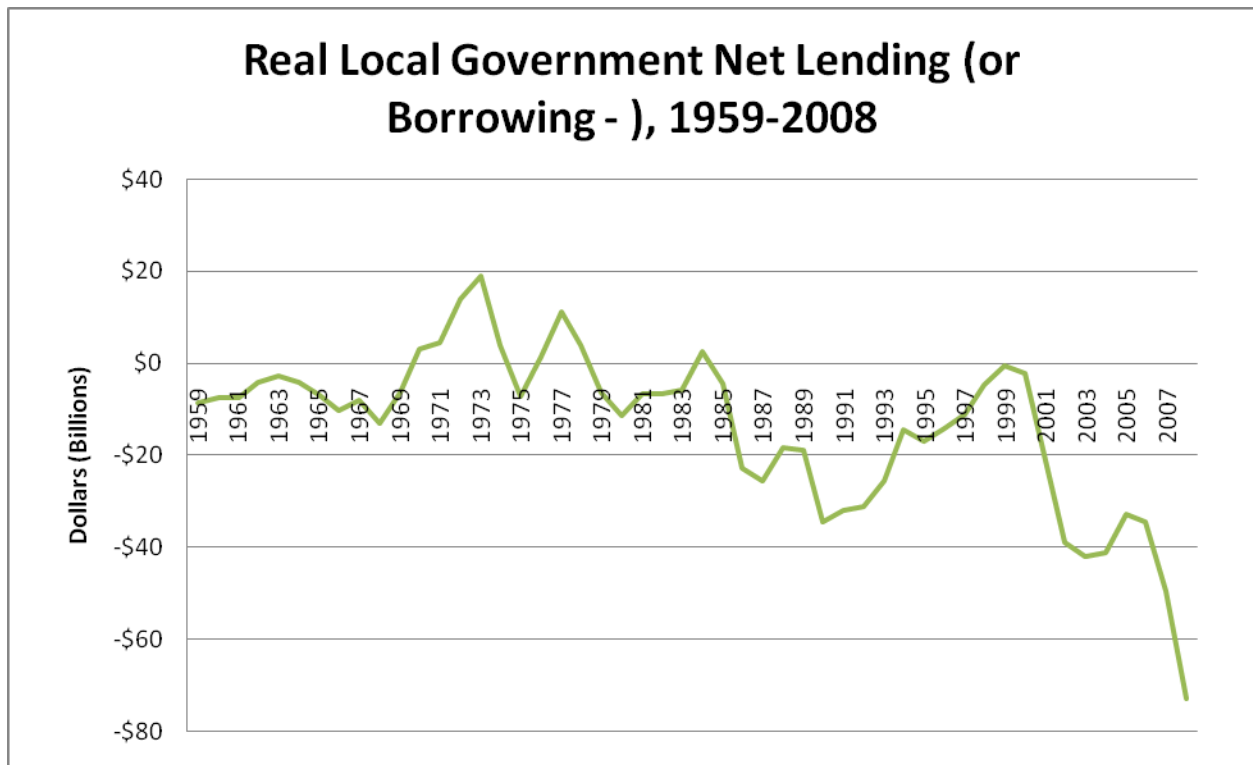
Data Source: The Federal Reserve, 2009

Figure 5



Source: The BEA National Economics Accounts, 2009

Figure 6

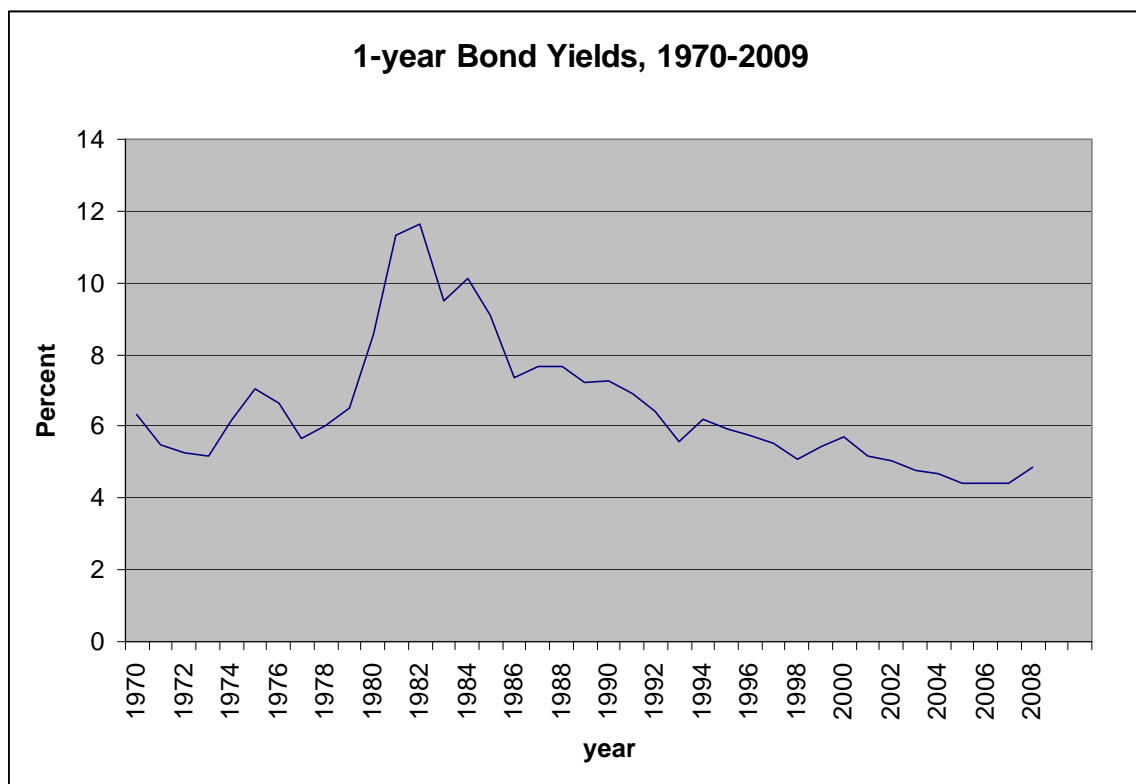


Data Source: The BEA National Economics Accounts

Municipal bond yields have remained at historically low rates as well, even though the market rebounded a bit from its 2008 low. AAA-rated municipal bond yields ended in the third quarter of 2009 at 2.96%, down from 3.37% at the end of the second quarter and 4.16% at the end of the same year-earlier period. The SIFMA Municipal Swap Index, a short-term yield of tax-exempt variable rate demand obligations rose slightly to 0.34% at the end of September 2010 from 0.3% at the end of June.¹³ These trends can be seen in [Figure 7](#).

¹³ Rainy, 2010

Figure 7



Source: US Census Bureau, 2010

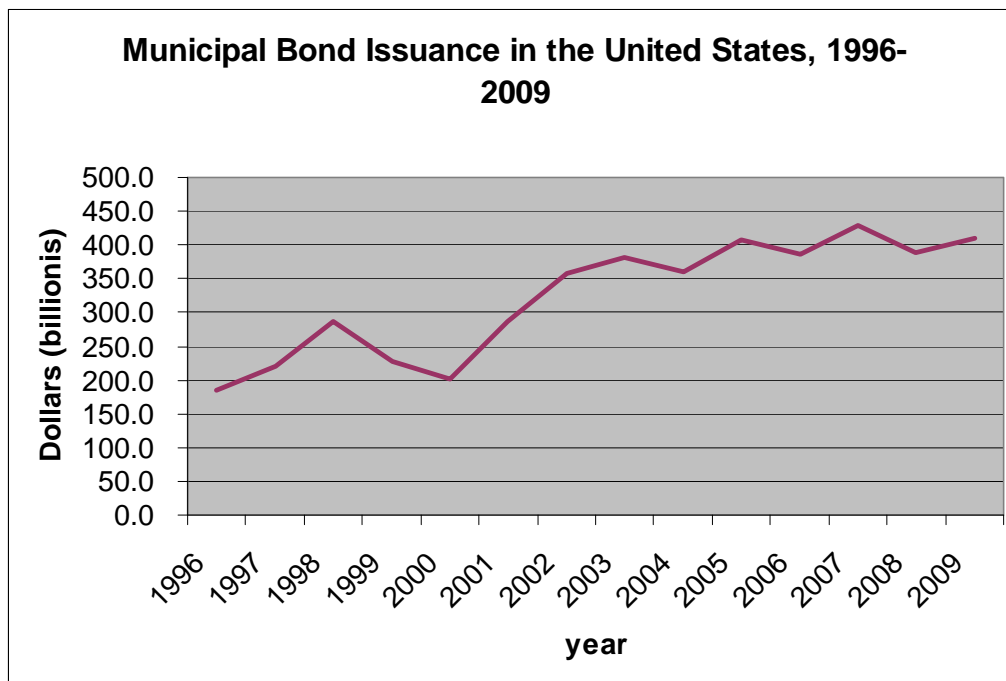
Although yields are down, a report and survey by the Securities Industry and Financial Markets Association forecast that total municipal issuance will increase by 14.0% by the end of 2010. This is mainly due to the issuance of several new taxable bonds in 2009 including the Build America Bonds (BABs) which will help taxable bonds alone to increase by 45.0% in 2010.¹⁴ Build America Bonds were issued under the American Recovery and Reinvestment Act of 2009 (ARRA) to provide funding for state and local governments at lower borrowing costs. They were designed to provide a Federal subsidy for a larger portion of the borrowing costs of state and local governments than traditional tax-exempt bonds.¹⁵

¹⁴ Brandon, 2009

¹⁵ U.S. Treasury Department, 2009

Issuance of BABs amounted to \$20.0 billion in the third quarter of 2009 with more than a quarter of the proceeds going to public works projects, slightly less going to the building and repairing of roads, streets and highways, and a smaller portion going to higher education.¹⁶ The BAB program has prevented the municipal bond market from falling further than where it was in late 2008. In fact, it is forecast that there will be \$435.0 billion of municipal bond volume in 2010, which would be the largest amount of municipal bonds ever sold in a single year.¹⁷ Municipal bond issuance through 2009 can be seen in Figure 8 below.

Figure 8



Municipal Bond Market Institutions

Credit rating agencies play a large part in the municipal bond market. They originally began as a group of various competitive firms that classified bonds in the late 19th century. From these firms grew what we know as Standard & Poor's and Moody's Investors' Service, with more power condensed in a few firms.

¹⁶ Rainy, 2010

¹⁷ Seymour, 2010

In addition to the monopoly issues of credit rating agencies of today, problems also arise in the way that these firms earn money. The early credit rating firms earned money by charging investors subscription fees. Now, credit rating agencies earn money by charging the issuers which is argued to lead to some inflated ratings due to misaligned incentives for the credit rating agencies.¹⁸ For instance, from 1975 through 1987, both Moody's and Standard & Poor's gave top credit ratings to all of the major municipal debt issuers that subsequently went into default.¹⁹

A worsening credit rating raises the cost of borrowing for these governments. These problems coupled with decreased revenue sharing from the state, high unemployment, and low housing values have led to high levels fiscal stress for cities, increasing their chance of default and bankruptcy.²⁰

Bond insurance also plays a role in the municipal bond market and helps to decrease the cost of borrowing for public agencies. However, most of the bond insurance companies who participated in mortgage-backed securities have gone out of business since the financial crisis began. Right now in Michigan, there is only one AAA rated municipal bond insurance company left. In addition, the cost of this insurance has skyrocketed. Many public agencies cannot afford insurance in the first place. There were only \$2.1 billion of insured municipal bonds issued in May, 2010 – only 5.7% of the total.²¹

Bond insurance does not fundamentally alter the probability that a unit of government will default. However, some analysts and investors such as Warren Buffett argue that there are risks related to insuring municipal bonds. He says that public officials may be tempted to default on bonds whose payments are guaranteed by insurance companies (or states for that matter) rather than push through needed tax increases.²² Detroit, for instance, may be on this risky path. To make up for a 2010 budget shortfall of \$280.0 million, Detroit issued \$250.0 million of 20-year municipal notes in

¹⁸ Fahim, 2010

¹⁹ Stowe and Maloney, 2005

²⁰ Yousuf, 2010

²¹ Seymour, 2010

²² Frye and Selway, 2010

March which the State has guaranteed in the case of city insolvency.²³ This does not align incentives properly for Detroit to pay back these loans through taxes and expenditure cuts.

Bond insurance does increase the probability of payment to investors and it provides a signal to the investor that the municipality is not likely to default. Both of these factors help to hold the market together in times of uncertainty.

Current Default Situation

Due to this economic decline and housing crisis, Municipal bond defaults are on the rise. Last year 183 borrowers were unable to make \$6.4 billion of payments, most of which were risky municipal investments like suburban developments.²⁴ Even though these defaults are occurring, more debt is being issued. States issued 10.3% more debt in 2009 than in 2008, which will likely rise again in 2010. This is due in part to low interest rates and the availability of Build America Bonds as discussed earlier, as well as increased budget pressures and the oncoming exhaustion of ARRA funding.²⁵

Not all defaults are of equal severity. Technical defaults, for instance, are those where the issuer has failed to meet a requirement of the debt agreement but has not yet missed a payment to the creditors. Technical defaults can be caused by a failure to maintain an adequate debt service reserve fund or administrative delays in issuing checks. These are not as severe as actual missed payments to the creditors.²⁶

Some analysts fear that a default contagion could be possible in the event of some municipalities defaulting, in which these defaults spread throughout the municipal bond market and collapse the whole system. However, experts seem to agree that default contagion on a massive scale is unlikely

²³ Behunek, 2010

²⁴ Behunek, 2010

²⁵ Siegel, 2010

²⁶ Stowe and Maloney, 2005

in the United States.²⁷ Early studies of contagion found that government borrowing costs rose following the New York City crisis in 1975. However, later studies with more advanced analytical techniques found little evidence to support this contention.²⁸ Therefore, it remains an open question as to the short- and long-term impact on borrowing costs of a local government default on its own and other peer group governments.

MUNICIPAL BONDS IN MICHIGAN

The next section focuses on Michigan laws concerning municipal bond and related special assessment debt. Currently, Michigan has approximately \$45.0 billion in outstanding municipal debt. Of this total, there is \$24.0 billion in city general obligation debt and \$14.0 billion in revenue bond debt and \$3.0 billion in limited tax general obligation debt. All of this debt is based on a series of state laws that permits local governments to issue debt, the process for issuing debt and any specific debt limits.

Michigan Law concerning Municipal Bonds

There have been many state laws implemented in Michigan to enhance the Federal laws already in place governing the issuance of municipal bonds. One of the first of these laws came in 1911, with the passing of Act 28 titled “Public Buildings and Bridges”. This Act authorized the board of supervisors of any county to raise by taxation or borrow money for the purpose of purchasing real estate and constructing or repairing public buildings and bridges. It also limited the amount that could be raised or borrowed for such purposes.

In 1923, the Permanent Improvements by Counties Act (Public Act 118) was passed which authorized counties to raise by loan, expend from unallocated monies on hand, or borrow money for permanent improvements, to issue bonds, and to levy taxes to the extent necessary for the

²⁷ Behunek, 2010

²⁸ Stowe and Maloney, 2005

repayment of the bonds. This extended the previous act to include permanent improvements outside of just buildings and bridges.

In 1933, the Revenue Bond Act (Public Act 94) was passed in which public corporations became authorized to purchase, acquire, construct, improve, enlarge, extend, or repair public improvements within or without their corporate limits through the use of bonds. This Act extended the previous two acts to include other forms of local government outside of counties.

This Act provided for a pledge by public corporations of their full faith and credit and the levy of taxes without limitation as to rate or amount to the extent necessary for the payment of the bonds, or for advancing money from general funds for payment of bonds. It also provided for payment, retirement, and security of such bonds as well as the imposition of special assessment bonds for the purpose of refunding outstanding revenue bonds. Public Act 94 also set up the powers and duties of the Department of Treasury and of the Municipal Finance Commission as they relate to such bonds.

Also in 1933, the Defaulted Municipal Bonds Act (Public Act 204) was passed, which made it possible for municipalities to call for and accept tenders of defaulted bonds. Under this law, whenever any bonds of any special assessment district or improvement district of any county, city, township, village, or school district are in default for a period of longer than six months and there are not sufficient sums of money on hand to pay the principal and interest, the governing body of the municipality may, by resolution, call for tenders of such defaulted bonds and advertise such call for tenders of bonds at least once.

The Municipal Borrowing Act of 1937 (Public Act 79) then authorized municipalities to borrow money and issue notes in anticipation of the collection of revenue other than taxes and special assessments. A limit was placed on this borrowing, however, at 10.0% of the total revenue of the public utility for the preceding fiscal year.

In 1943, the Borrowing for Road Purposes Act (Public Act 143) was passed, empowering boards of county road commissioners to borrow money in anticipation future revenues for the purpose of purchasing road machinery or equipment or for improvement of county highways or for general

county road purposes. This, however, must be done upon the adoption of a resolution and the sum of the amount borrowed was capped at the amount previously authorized by their respective county board of commissioners. In addition, only the construction, improvement, maintenance, or repair of highways allowed for a loan payable in more than two installments.

In 1969, the Bonds or Notes for Capital Improvements Act (Public Act 121) was passed, which authorized local governments to issue bonds or notes, and pledge deferred income from sale of capital assets for the payment of principal and interest. This also was required to be done by resolution adopted by a majority vote of the members elect of its legislative body. It required that money realized from issuance of bonds or notes shall be used solely for capital improvements. It required that the last maturity be due not later than the year in which the final payment is due according to the contract of sale of capital assets. In addition, the maximum principal and interest falling due in any year cannot exceed income to be received during that year from the contract of sale of capital assets plus any income due in prior years that will not be required for payment of principal or interest, or both, in prior years. Finally, the bonds and coupons and notes were made exempt from taxation by this State or by any taxing authority within this State. Public Act 34 of 2001 later amended this act, which will be discussed later.

Then, in 1980, the Emergency Municipal Loan Act (Public Act 243) was passed which was the first to provide emergency financial assistance to certain municipalities, creating a local emergency financial assistance loan board. The board was prescribed to consist of the State Treasurer, the Director of the Department of Consumer and Industry Services, and the Director of the Department of Management and Budget. This same board would later also handle emergency financial managers.

In 1985, the Shared Credit Rating Act (Public Act 227) was passed, which created the Michigan Municipal Bond Authority which could now issue notes and bonds to local governmental units for the financing of public improvements, community water supplies and noncommunity water supplies, and other municipal purposes. This Authority was prescribed in this Act to have full powers to borrow money and to issue its bonds and notes at reduced rates or on more favorable terms for borrowing by the State's governmental units. This Act also authorized certain forms of

assistance to governmental units including the creation and management of investments. Finally, it exempted the authority from certain taxes.

Finally, in 2001, the Revised Municipal Finance Act (Public Act 34) was passed which updated the laws pertaining to the borrowing of money and the issuance of certain debt and securities, short-term municipal securities, long-term municipal securities, refunding, tax levies, debt retirement, and sinking funds. This law prescribed that a municipal security may not include any of the following: a contract for the purchase of real or personal property, a contract for the lease of real or personal property with or without an option to purchase, a contract, lease, note, or other security given in connection with a contract described in the previous two listings, a security that is evidence of an emergency loan under section 1 of 1855 PA 105, MCL 21.141, in conjunction with the Emergency Municipal Loan Act; 1980 PA 243, MCL 141.931 to 141.942, or qualified agricultural loans under section 2a of 1855 PA 105, MCL 21.142a, a mortgage secured by real property and its corresponding security to the extent secured by the mortgage, or a contract between one or more municipalities under whose terms one or more municipalities pledge their revenue or full faith and credit to secure payment of a proposed municipal security issued by one of the municipalities. This Act also required the filing of municipal audit reports annually with the Department within six months from the end of its fiscal year or as otherwise provided in the Uniform Budgeting and Accounting Act, PA 2 of 1968.

In 2010, Governor Jennifer M. Granholm issued Executive Order 2010-2 to further improve efficiency in State government by consolidating 10 public finance authorities into one Michigan Finance Authority. The new finance authority will be an autonomous entity within the Department of Treasury. The Bureau of Bond Finance within Treasury will provide staff and administrative support for the Authority.²⁹

²⁹ See Appendix A for Definitions of terms within each law

Michigan Debt Limits and Restrictions

Over time, State governments have placed increasing restrictions on local government in order to control the level and type of debt. These restrictions have taken many forms including:

- Preauthorization or registration to issue debt
- Debt restriction
- Debt limits

Debt restrictions are typically a limit on the types of government activities that can be covered by debt issuance. For example, hospitals, educational facilities, water and sewer projects all may or may be eligible for debt issuance. Debt limits are expressed as a certain amount or percentage above which a local government may not incur debt. Debt limits can be expressed as dollar amounts or may be expressed as a percent of property assessed value. Debt restrictions and debt limits can be intertwined. Certain types of debt may be exempt from debt limit calculations for example.

In Section IX, Article 13 of the Michigan Constitution provides for the authority of public corporate bodies, such as counties, villages, townships, and cities, to borrow. The constitutional article also allows the Legislature to place limits on this borrowing. The Constitution also sets forth a debt limit specifically to county government. County governments may not incur indebtedness above 10.0% of assessed value. Further, in the Constitution, The Legislature has the power to specifically limit the incursion of debt by cities and villages.

The Legislature used its powers, as discussed in the Michigan Constitution, to place some statutory limits on local debt. The Charter Township Act (PA 359 of 1947) has language that limits total township indebtedness to 10.0% of assessed value. However, certain debt is excluded from this limit. Exemptions include special assessment debt, revenue bonds and certain other special debt. These restrictions are justified on the basis that they are secured by specific revenue sources.

General Law townships do not operate under any general debt limit. Other debt limits, such as the special assessment debt limit, do apply to general law townships

The Legislature has imposed other registration requirements on local government units. The Revised Municipal Finance Act of 2001 requires any local unit wishing to issue debt to undertake several activities in order to do so. Several statutory requirements are placed on local governments including:

- Municipality is not operating under an emergency financial manager
- Financial audit was filed on time
- Municipality is not exceeding constitutional or statutory debt limits
- Municipality has not violated any outstanding debt covenants
- Municipality has not issued any false qualifying statements
- Municipality does not have greater than 18.0% of property taxes delinquent,

and several others. These conditions fall into the category of preauthorization or registration requirements. They are intended to ensure the State monitors the debt practices of local governments. Many of the thresholds set in these types of registration acts are based on previous bad practices and may or may not be appropriate for current conditions.

In regard to the current study, there is a specific debt limit on special assessment debt. Under PA 34 of 2001, the law states that a municipality may not incur special assessment greater than 12.0% of total State Equalized Value (SEV) within that jurisdiction and may not issue an amount in any one year greater than 3.0% of SEV. This limit applies to any municipality that issues a municipal security secured by a special assessment revenue source. The limit also only applies to debt that is secondarily issued on behalf of a local government. A township or city who directly issues special assessment debt is not subject to this limit.

Economic Crisis and Municipal Finances: Background and Overview

A fervent debate is currently taking place as to the safety and future of the municipal bond market. Some analysts believe that the municipal bond market is headed for failure. They argue that the assumption that cities and states will do anything to avoid default is incorrect, and that the ideas of being "too big to fail" and that they will not default based on the lack of defaults in the recent past were all of the same arguments that prevented people from predicting the mortgage backed securities failure.³⁰

Investors such as Warren Buffet have also predicted a "terrible problem" for municipal bonds in the coming years. His company, Berkshire Hathaway Inc., has Berkshire has scaled back sales of municipal bonds because the rates that bondholders are willing to pay do not match their perceived risk in the market.³¹ Some believe that there is a bubble in the municipal bond market and that if the bubble bursts, agencies will be unable to borrow and will have to cancel or postpone public projects such as school construction or building roads and highways. They say that if this bubble bursts, governments could default and upend this historically safe market. However, empirical analysis has yet to show the existence of a bubble in the market, and bubbles are very hard to predict or prove.

Others believe that these arguments are overblown and that bonds continue to be a safe investment. Credit Suisse for example, a multi-line insurance company, argues that concerns over municipal bond risk are overblown. Based on their analysis, they believe that ultimate losses should be manageable. The default rate among corporate bonds is still much higher than that of municipal bonds.³² Michigan does not rank in their list of states most at risk, nor on their list of states with the highest debt to State Gross Domestic Product for 2011.

³⁰ Gelinas, 2010

³¹ Frye and Selway, 2010

³² Ghosh, 2010

Municipal bond investors willingly accept lower yields compared to other fixed income investments primarily due to the safety record of municipal bonds.³³ If this safety record falters, municipal bonds could face a credit crunch or higher borrowing costs. Whether or not the municipal bond market is headed for significant problems is as yet unknown. However, certain types of bonds are more at risk of default than others, and risk analysis should be undertaken to prevent these defaults at all levels. The next section details the conditions that have led to problems and challenges for the municipal bond market with a focus on Michigan.

Economic Background (2000-2009)

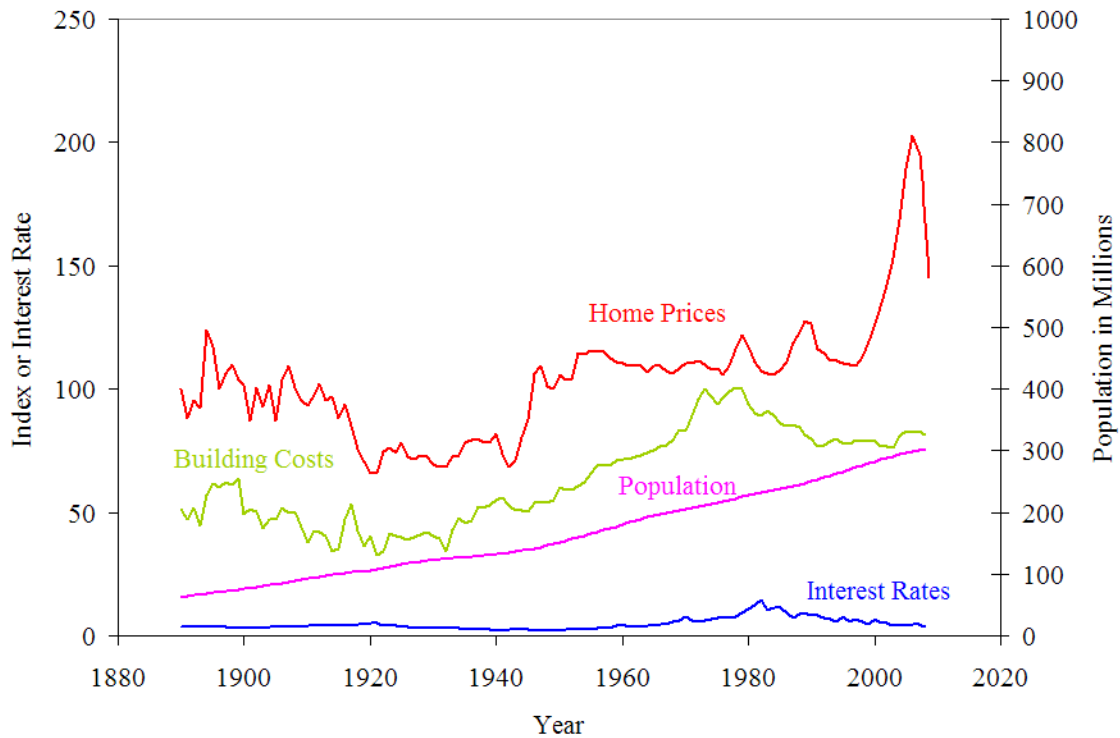
It has been well documented that a housing bubble occurred in the United States beginning in the late 1990s and ending in 2006. This bubble was brought on by a combination of factors including low interest rates following the 2000 recession and events of 9/11, excess savings from around the world following the Internet stock bust, and a favorable lending environment and securitization of subprime loans.

Figure 9, updated from Robert Shiller's book *Irrational Exuberance*, illustrates this bubble. The graphs shows U.S. real home prices along with building costs, population, and long-term government bond interest rates from 1890 through 2008. The 2006 housing bubble burst can be observed by the sharp drop in home prices which cannot be explained by any significant changes in the other variables on the graph. The ratios of home prices to building costs, home prices to rent, and home prices to personal income soared in the run-up to the peak of the market in 2006 reflecting a misalignment of home prices with economic fundamentals.³⁴ This downturn coincided with an increase in the amount of defaults on sub-prime loans which, in turn, caused more houses to be put into the market which depressed prices further.

³³ MunicipalBonds.com, 2010

Figure 9

**U.S. Real Home Prices, 1890-2008, Along with Building Costs, Population,
and Long-Term Government Bond Interest Rates**



Updated from Robert J. Shiller, *Irrational Exuberance*, 2nd Edition (Princeton, N.J.: Princeton University Press, 2005), p. 13.

Between 2002 and 2006, residential and nonresidential construction contributed to about one-half of all GDP growth in the United States. Translated into jobs, this means that of the 7.0 million jobs created in the United States between 2000 and 2007, nearly 1.0 million were construction jobs. This represents a far higher ratio of construction jobs to total jobs than in any previous post World War II economic recovery era. Real estate also experienced a nearly 11.0% increase in jobs. In contrast, total employment in the U.S. increased at only a 5.0% rate.

³⁴ Shiller, 2008

Since the peak in construction employment in 2007, nearly 8.0 million jobs have been lost.³⁵ Of those job losses, nearly one-fourth of those occurred in the constructions sector where over 2.0 million jobs have been lost. Further, almost 100,000 jobs have been eliminated in the real estate sector. These two sectors account for approximately 30.0% of all jobs lost in the U.S in 2008 and 2009.

More telling, perhaps, are the changes over the decade in loan volumes, home prices, and real estate building permits. Using the Case-Shiller home price index, property values rose from a baseline 100 in January 2000 to a value of 225 by January 2007 -- an increase of nearly 125% for the United States. Michigan home prices during the same period rose 25.0%. For the U.S., this was one of the largest periods of sustained home price increases in the nation's history. Some of that housing bubble did affect parts of the Michigan economy despite the general falloff in employment in the state throughout the first decade of the 2000s.

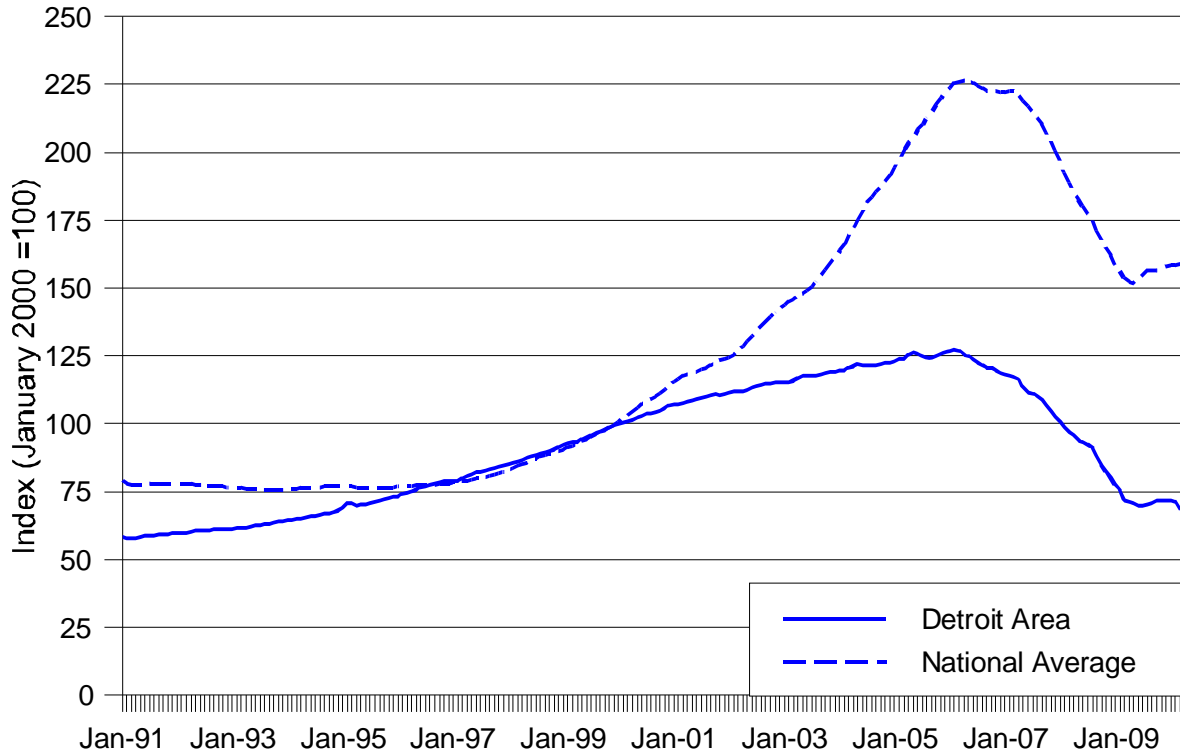
Since 2007, U.S. home prices have fallen dramatically (almost in half). This was one of the major precipitating factors behind the Great Recession and financial crisis of 2008-09. U.S. home prices are now equal to where they were in 2003. Michigan home prices, despite having not risen as much, are now where they were in the mid-1990s as can be seen in [Figure 10](#) below.

³⁵ US BLS, 2010

Figure 10

U.S. and Detroit-Area Housing Prices

Prices Around 2003-2004 Level Nationally, 1995 Level in Detroit



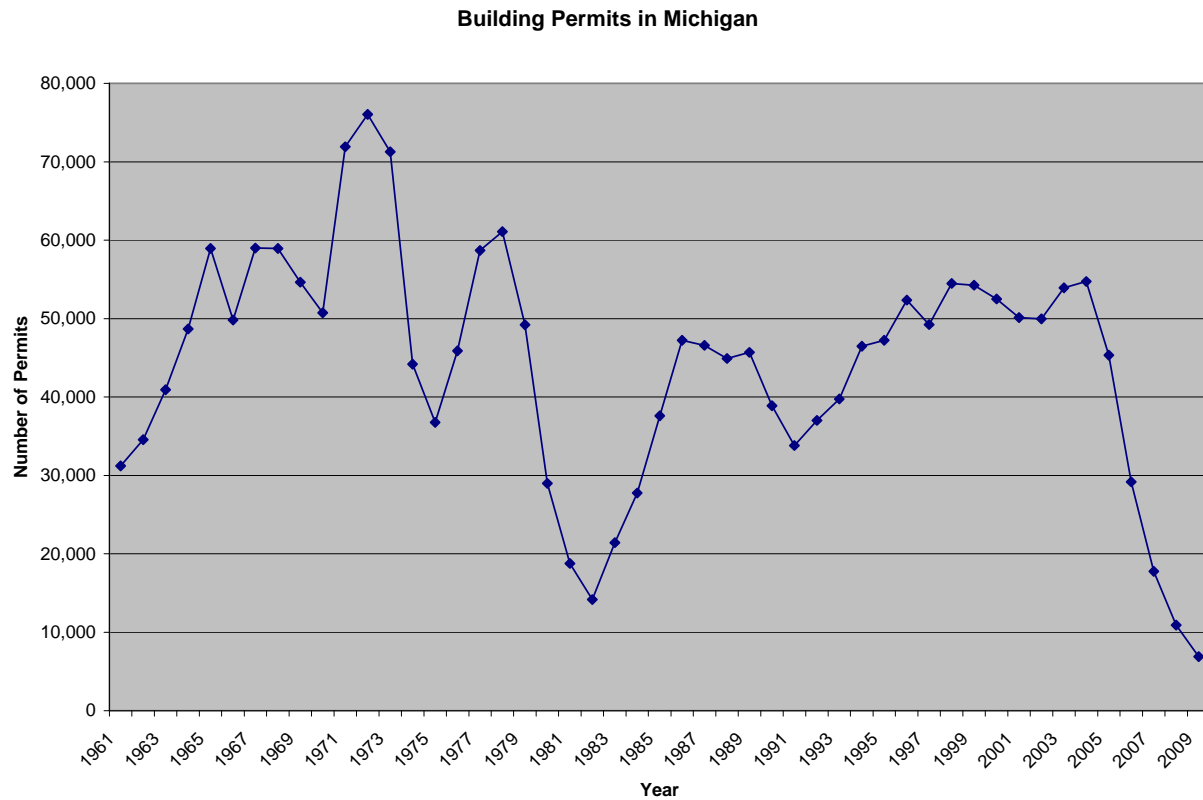
Source: Standard and Poor's Case Shiller Index, 2010

United States building permits peaked in the mid 2000's at about 2.2 million. Since that time, there has been a large falloff. In 2009 and early 2010, building permits were averaging only about 300,000 to 400,000 on an annual basis. This represented a nearly 75.0% decline. Every region of the nation has been hit, including Michigan.

Beginning in the mid-1990s, Michigan experienced a big run in building permits and values from 33,000 permits worth \$3.0 billion in 1991 to 54,000 permits in 2004 worth over \$7.5 billion. However, in 2004 this remarkable run began to falter and eventually turned into a massive decline. By 2009, building permits had fallen to under 7,000 annually, a record low since 1960, and a total value of just \$1.0 billion -- a number not experienced since the early 1980s.

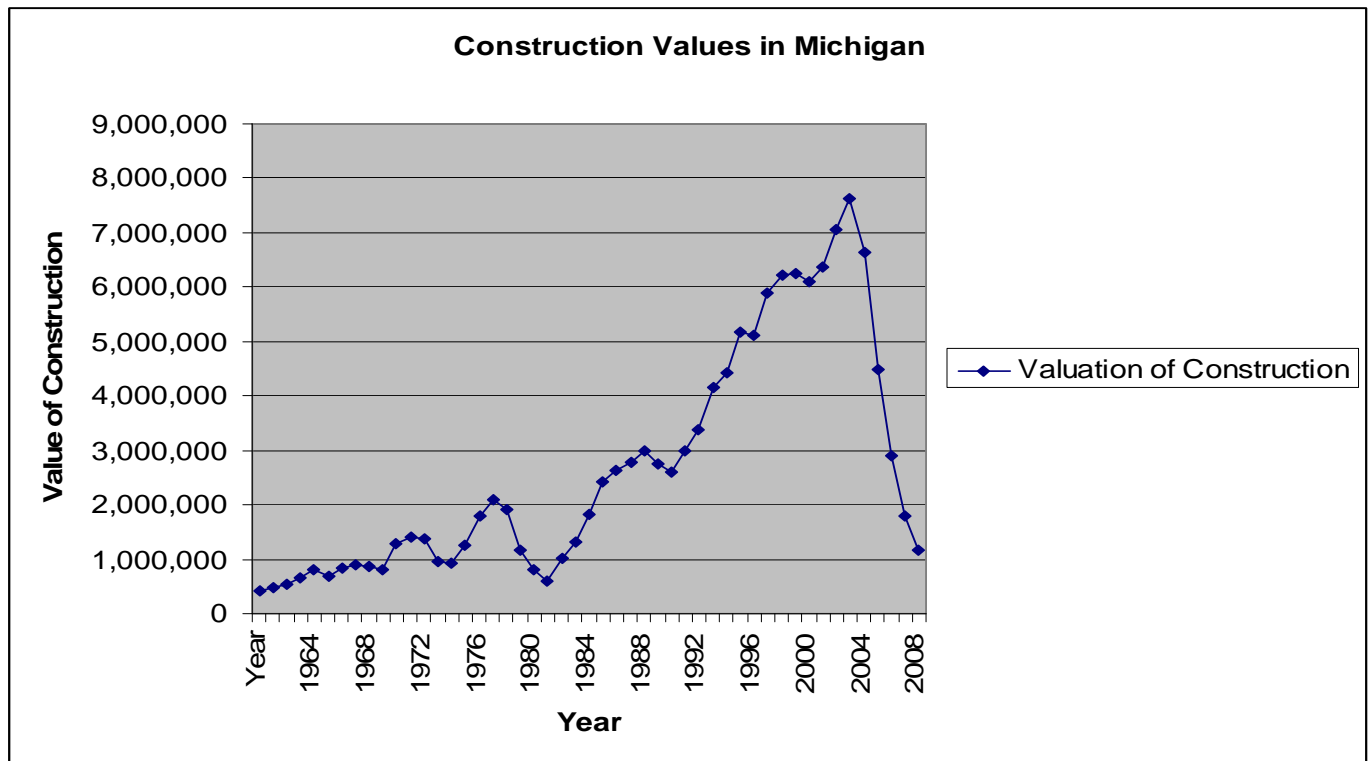
Figure 11 reveals the change in the value of new building permits in the state of Michigan. Figure 9 shows the change by year in total building permits issued in the State from 1960 to the present. In both graphs, one can see how the Great Recession of 2008-09 led to record declines in the number and value of permits issued.

Figure 11: Building Permits in Michigan, 1961-2010



Source: U.S. Census Bureau, 2010

Figure 12



Source: U.S. Census Bureau, 2010

Building permits in Michigan were not evenly scattered, though. Single family residential building permits were highly concentrated in certain parts of the State such as Genesee, Kent, Livingston, Oakland, and Macomb Counties which represented over 50.0% of all building permits in the State during 2005 at the height of the national housing bubble. Regions such as these had high rates of speculation which caused overbuilding and in some cases excessive use of special assessments to induce further development. By 2009, these statistics had changed dramatically and these counties represented only 16.0% of all Michigan building permits.

All of this evidence emphasizes the rise and decline in the real estate market throughout the last decade. Michigan did not participate fully in this housing bubble due to the preceding decline of the transportation manufacturing sector which impeded housing inflation in the State. However, Michigan was not entirely immune from the real estate speculation that occurred during this period.

These areas that experienced a fast growing housing market also had significant demand for the expansion of infrastructure. In particular, the demand for water, sewer, and road infrastructure for residential development was strong in some select areas of the State.

Property Assessment and Tax Structure

Given the major fluctuations in the property and real estate market, there are important consequences for local governments' main revenue stream which is the property tax. There are also several other important revenue streams related to municipal bond issues in Michigan including special assessments and water and sewer user fees. Further, special assessment revenue and water and sewer user fees are also related to activity in the real estate market. All of these revenue streams rely on the underlying value of property as well as the total real estate activity in a specific jurisdiction, or even specific part of a jurisdiction to serve as the source of repayment for municipal bonds and impact the health of overall municipal finances.

The first issue of concern following the Great Recession is the value of underlying property as measured by assessed and taxable value and the rate of taxation as measured in millage levels. Changes to either one of these factors can increase or decrease the revenue stream for repayment and to pay other obligations. This section reviews trends in both of those critical revenue streams.

Even before the approval of the General Property Tax Act in 1893, property taxes have been the main own-source revenue for local governments in Michigan. Therefore, property taxes are one of the main determinants of a government's ability to pay back general obligation municipal bond debt. This section discusses the property tax structure in Michigan and how it relates to the risks associated with municipal bonds.

Several State laws and constitutional amendments have shifted the property tax system over the last few decades. The 1978 Headlee Amendment was a large change to local property taxes. In the midst of the so-called "property tax revolt", this amendment resulted in a significant restrictions ion local governments. In particular, the jurisdiction's property tax revenue was limited to an increase in the rate of inflation. This provision does exclude new construction and improvements. If the

increase in property tax revenue yield exceeds the rate of inflation, the millage rate must be reduced to produce an increase in revenue yield equal to the inflation rate. The law did allow jurisdictions to roll-up millage rates in the revenue yield increased less than inflation.

The property tax structure was again altered in 1994 by the imposition of a constitutional cap on the growth of assessment increases for tax purposes called Proposal A³⁶. Under Proposal A, each parcel in a jurisdiction has been limited in how much it can rise. The new term created was called taxable value. The taxable value of a parcel is only allowed to increase at the rate of five percent or inflation whichever is lower. The major exception to this clause is that the sale of a parcel results in a "pop-up" effect in which the taxable value is allowed to rise to the SEV.

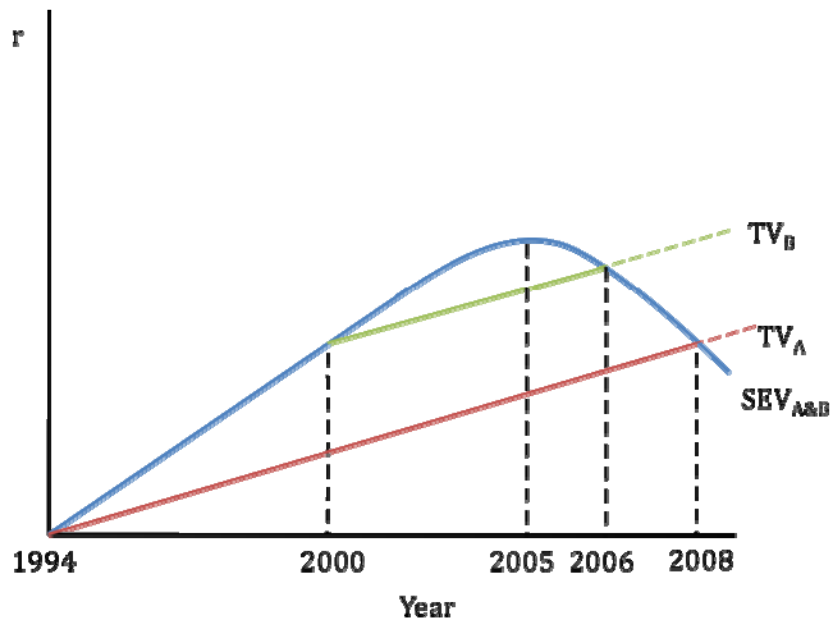
Historically since 1994, State and local policy makers were concerned by the growing gap between SEV and taxable value. Proposal A, with its limit at the parcel level, was more restrictive than Headlee under the typical conditions of growing home values. This led to SEV growing faster than taxable value. This led to a growing gap between residential market value and the actually taxable value upon which property taxes were laid. Up until, the last few years, this growing gap was seen as a major policy issue.

The changes since Proposal A can better be understood through Figure 13.

³⁶ Note: Proposal A also altered the property tax structure in other ways including separating school operating expenses from the property tax, cutting homestead millage rates, cutting statewide average school millage rates from 34 mills to 6 mills, putting an 18-mill limit for schools on nonhomestead property, increasing the cigarette tax, and increasing the sales tax.

Figure 13: SEV and TV Examples

Graph



Source: Mark Skidmore, Michigan State University, 2008

As can be seen above, SEV has grown at a faster rate than taxable value (TV) since the introduction of Proposal A in 1994. TV_A is an example of a property that has not been sold since 1994. $TV_{\square B}$ refers to what is called a “pop up”, or property that has been sold since Proposal A was put into place. In this example, the property was sold in 2000, at which point the property tax was realigned with the SEV but then only allowed to grow the lesser of the rate of inflation or 5.0% once again. This feature of Proposal A has benefited older, high-income homeowners at the expense of younger, lower income ones³⁷.

It was not anticipated that the SEV would begin to decrease and fall below TV as has already occurred for many properties. When this event occurs, the property tax paid by the owner follows

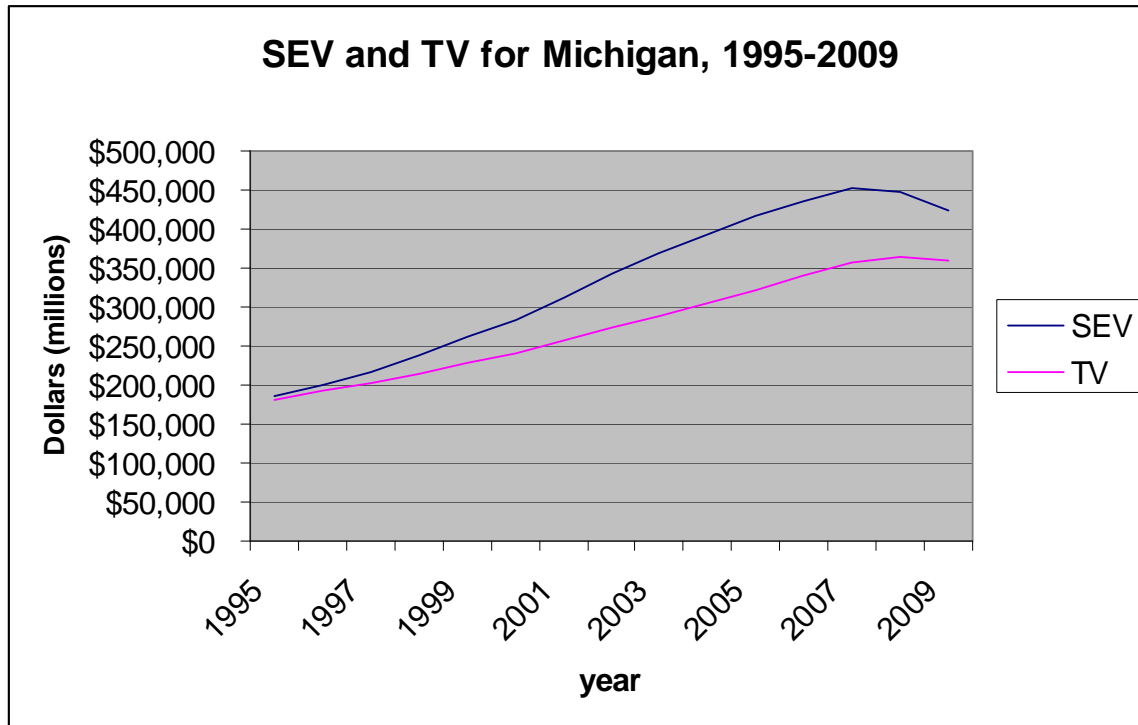
³⁷ Skidmore and Tosun, 2008

the fall in SEV. In the short-run, Proposal A may help to insulate local revenue from the declining home values. Eventually, however, with a sustained period of falling home prices, SEV and TV would move together and result in declining property taxes. When housing prices do stabilize and even begin to increase, TV will have been permanently ratcheted downward and local unit fiscal capacity may not recover for years.

As the housing and financial crisis began to unfold in 2007 and 2008, property values began a precipitous and sustained fall across the nation and in Michigan as documented earlier. Initially, declining property values affected SEV. Because in many communities there was a large gap between TV and SEV, it did not lead to immediate reductions in property tax revenue. However, for some fast growing communities that had a high turnover rate in the residential market, the gap between SEV and TV was small. At the point where SEV equals TV, the TV begins to fall in lock step with SEV under State law. This results in a reduction in property taxes paid by that parcel.

At the State level, the growing gap between SEV and TV ended in the mid-2000s and this has been rapidly reduced. This quickly declining gap has finally led to pressure on State level property taxes as revealed in a decline the State Education Tax. Figure 14 shows how this gap has quickly closed as home prices fell.

Figure 14



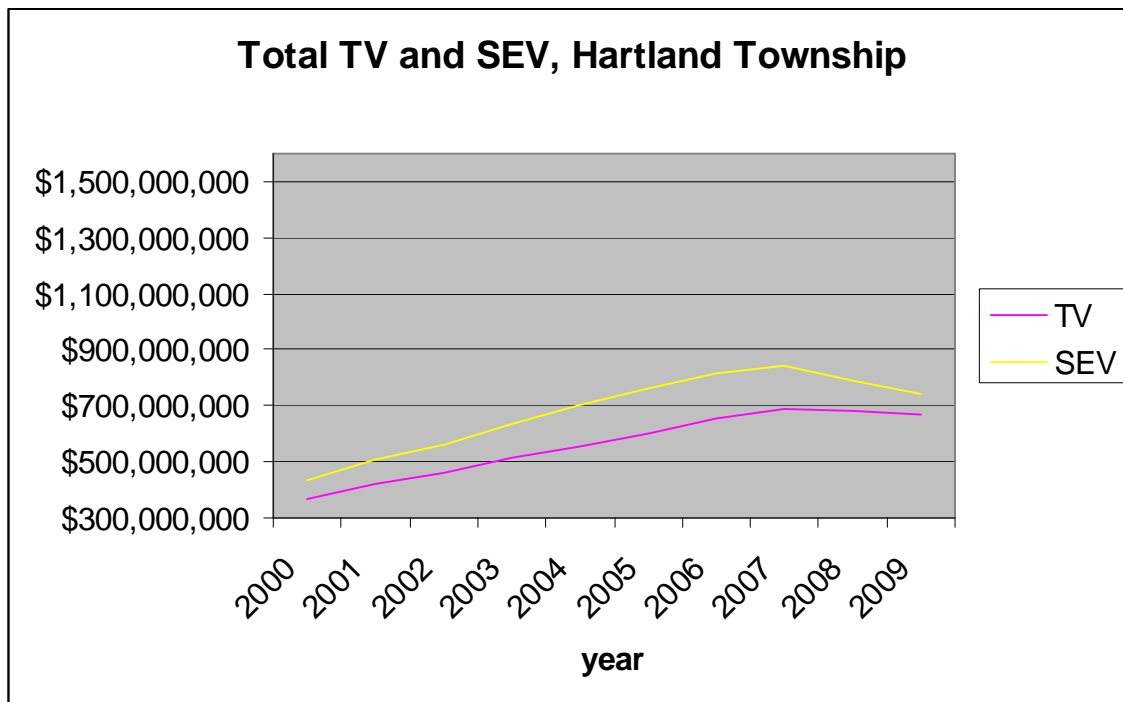
Data Source: Michigan Department of Treasury

At the jurisdiction level, as enough parcels reach the point where SEV and TV are equal, property taxes are likely to begin to fall in the absence of a rate increase. While this threshold varies across jurisdictions, the 90% mark is a threshold where it becomes fairly likely that property tax revenue will decline.

Given the dramatic changes in the underlying value of property across the State, these changes translate into significant impacts on overall property tax collections. Property taxes may be sluggish to respond to changing economic conditions due to the property assessment process. Even after the 1929 Stock Market crash, Michigan property tax collections continued to rise for several years. This led to the constitutional amendment imposing the 15-mill limit on property taxation. Eventually, the Great Depression did catch up to tax collections leading to large declines in revenue for local governments.

Some examples of property values in Michigan can be seen in the following graphs. [Figure 15](#) shows total TV and SEV for Hartland Township from 2000 to 2010. Hartland Township was relatively well off preceding the Great Recession because their TV was fairly close to their SEV (and hence, property taxes were more in line with the value of the properties). However, since the recession, TV started decreasing almost immediately and the gap has closed significantly and for many properties in the township, the TV has come to equal the SEV.

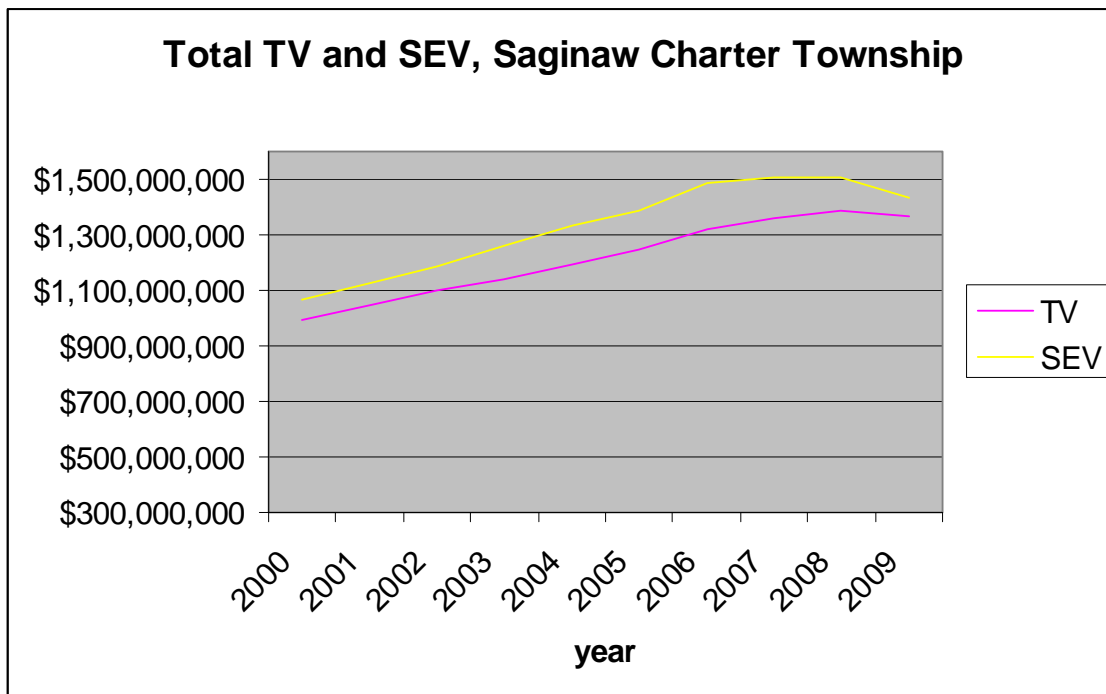
Figure 15



Source: Michigan Department of Treasury, 2010

Saginaw Township, on the other hand, had more of a grace period after the recession before their TV began to decrease as can be seen in figure X below. This is because Saginaw was relatively worse off before the recession and had a larger gap in between their TV and SEV for most parcels. After the recession, TV continued to increase in Saginaw Township until about halfway through 2008 when it started to decline as seen in [figure 16](#).

Figure 16



Source: Michigan Department of Treasury, 2010

This same lag occurred in Michigan during the current recession as can be seen in [Figure 17](#). Property tax collections continued to rise well into 2008, even after the housing bubble burst. For many jurisdictions, property tax collections rose through 2009. In 2005, 2006, and 2007, there were calls to further limit property tax collections. Now in 2010, the impact of falling property values is beginning to translate into falling property tax revenue for many, if not most, jurisdictions.

However, residential property values may not be the last source of property tax woes for local governments in the U.S. Economists have predicted since the bursting of the residential housing bubble that commercial real estate will be the next shoe to drop. There is some indication that this has already begun to happen. Fitch's index of commercial property loans that are at least 60 days delinquent or in foreclosure rose to 8.14% in June from a low of 0.27% in January of 2008. Fitch expects that index could reach 12.0% in 2012.³⁸ If the commercial real estate market does worsen, financing costs will rise for municipalities and property taxes will decrease.

³⁸ Bullock, 2010

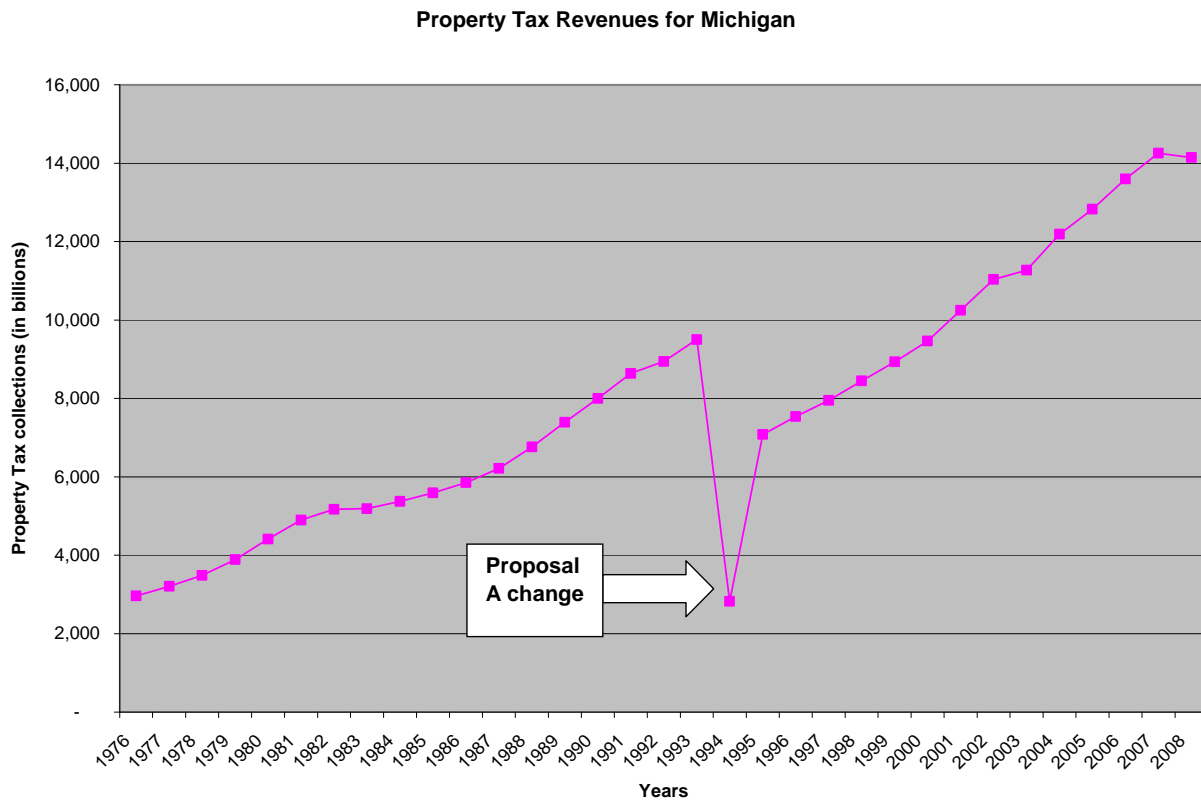
Property Tax Revenue

Michigan local governments have been under significant fiscal pressure for most of the last decade. State revenue sharing to local governments, the second most important revenue source, has been decreasing at a steady pace over the decade. Throughout the first half of the decade of the 2000s, the State began to reduce statutory revenue sharing in an attempt to address an ongoing fiscal deficit. By the middle part of the decade, the State had cut revenue sharing by nearly \$450.0 million. Many smaller municipalities, particularly townships were no longer receiving statutory revenue sharing while larger communities had seen significant cuts.

Even as Michigan was reducing revenue sharing in the early part of the 2000s, local property taxes continued to rise as an offsetting factor. Rising property taxes, partially attributable to the U.S. housing bubble that began in the late 1990s and extended through the mid-2000s, mitigated the reduction in State aid. From 2000 through 2005, US home prices rose by nearly 25.0%.

As home prices were rising during the early part of the 2000s, statewide property tax collections also rose at a significant pace. From 2000 through 2005, property tax revenue grew by almost 35.0% in Michigan. This type of growth, given the limitations imposed by Proposal A and the Headlee Amendment, can only be explained by new construction or legal changes. In fact, the value of building permits grew by almost 30.0% in that time frame and the total number of building permits grew by more than 10.0%. The combination of these factors led to growth in property tax revenue from 2000 through 2005 as can be seen in Figure 17.

Figure 17



Source: Michigan Department of Treasury

Of course, the ability to mitigate declining revenue sharing varied across governmental jurisdictions. Townships saw the largest rise in property taxes over the 2000s growing by an average 8.0%. City property taxes, on the other hand, grew at a much slower 4.0% average over the decade. Even this growth hides the fact that for many cities growth was stagnant. This includes core metropolitan cities such as Saginaw (0%) and Flint (3.0%). For other cities, the growth in property taxes just matched inflation or the cost of providing services.

Property tax collections have mirrored the change in building permits and new construction permit values over the decade. The massive decline in building permits and values has translated into a complete drop-off in property value and revenue increases for fast growing areas and falling

property values and the revenue for many others. For fast growing communities, such as those in Livingston County, large increases in construction and building meant large increases in property tax revenue. Construction and new buildings are exempt from the restrictions in Proposal A.

There have been some distinct patterns in the distribution of property tax collections across types of governments. Michigan collects the State Education Tax (SET) on behalf of the School Aid Fund. Over the past 10 years, the SET has grown on average at about 5.2%. This pattern changed in tax year 2008 with an actual decline of 1.4%. Part of the reason for this discrepancy is the change in law that exempted industrial and commercial personal property from certain school taxes including the SET and the School operating taxes.

County and township governments have grown about 5.0% over the period from the mid-1990s. However, there was a divergence in tax year 2008. Counties have experienced a slowdown of property tax collections to 2.1% in tax year 2008. Townships saw a slowdown in property tax revenue to 2.0% in tax year 2008. Both of these governmental units will likely see further slowdowns and possible declines in tax years 2009 and 2010.

City property tax collections grew more slowly than other types of local government. Over the past 15 years, tax collections grew at a rate of 4.5%, almost 1.0% less than counties and townships. This is perhaps not surprising given the setup of the property tax system under the Headlee Amendment and Proposal A. These two amendments combined have led to a property tax system that is generally disadvantageous to older core cities. Lacking new construction and building growth, these cities are generally squeezed by declining or stagnant property tax revenue streams. Cities experienced a slowdown in property taxes to 1.0%. This number likely will be negative in tax years 2009 and 2010 and possibly beyond.

Under the current property tax system, older communities may potentially be more protected from falling property values and revenue than newer communities. Newer communities, such as those that grew in southern Genesee County, Livingston County, and Ottawa County would have very little gap between their SEV and TV. Once their SEV falls below TV, the TV begins to fall along

with the market based SEV. In new communities, new homes have very little gap between their TV and SEV which results in rapidly falling TVs and property tax revenues.

Much of the financing of local government and school districts is based on the resource base of the property tax. In total, property taxes account for roughly 40.0% of all resources generated by local governments and are the single largest source of resources. For a very long period of time, property taxes have trended upward based on slow and steady growth in construction, housing and dependent on the locality's population as well.

However, in 2008, this pattern in property tax revenue changed for the first time and a decline in year-over-year revenue was experienced. The unprecedented fall in property values and taxes has significantly altered the debate regarding the capacity of property taxes to fund government services. In 2008, for the first time, property tax collections for the state declined in nominal terms. While there had been slowdowns during previous recessions, there has never been an actual decline in property tax collections. In 2008, property tax collections fell from \$14.25 billion to \$14.13 billion. This is critical given the amount of municipal and school debt that is secured by property tax collections and the expectation that those collections will remain stable or grow over time.

A key question is how severe this reduction in property tax revenue is and what its effect will be on long-term financial sustainability. In the short- and medium-term, the question is whether property tax declines will threaten the ability of municipalities to meet all of its claims or financial obligations. The next few sections outline the tax reversion process and other pertinent pieces of the property tax system in Michigan.

The Tax Reversion Process and Charge-Backs

Michigan has a very specific three-year process regarding property tax delinquencies. Property taxes are levied and due to local governments on December 1 (winter) and July 1 (summer). Various governments use different dates for collection. If property taxes owed are unpaid in a given year, a specific delinquent tax process begins.

If summer and winter property taxes are not collected by March 1 of the following year that the tax is owed, local treasurers pass on notices of unpaid or delinquent taxes to county treasurers. In many counties, the county treasurer runs a delinquent tax revolving fund. The county treasurer advances funds to those local governments who are owed taxes making them financially whole at that time. The county treasurer then adds on a 4.0% county property tax administration fee plus a 1.0% per month non-compounded interest and sends out two tax notices, one on June 1, then another on September 1 after which a \$15 fee is added to the tax note by the county treasurer.

In the second year of the delinquent tax process, the county treasurer sends out a third tax notice on February 1 and then on March 1 the property is forfeited to the Foreclosing Governmental Unit (FGU) with a \$175 per-parcel fee plus a 0.5% per-month interest retroactive to March 1 of the previous year. Seventy-one county treasurers opted-in as FGUs but for 12 counties responsibility for tax reversion shifts hands from the county to the State, and the property forfeits to the State as the FGU. Upon forfeiture, the FGU begins due process for owner notification: mails letters, conducts title research for the forfeited parcels, files circuit court petitions requesting hearings with respect to the forfeited parcels, and conducts site visits to the forfeited parcels.

Finally, in the third year of the tax reversion process, judicial foreclosure hearings are held. Once there is a judicial order of foreclosure and the redemption period of March 31 has expired, the foreclosed property is sold at public auction to the highest bidder by the FGU beginning in July. The proceeds from the sale are distributed according to the order of priority established in the statute. The unsold properties are then transferred to the local unit of government in which the parcel is located unless a written objection is filed in which case the state or county retains possession of the property.³⁹

Historically, counties have been able to auction properties and recover delinquent tax funds through such auctions. The recent housing and financial crisis has put a major damper on these auctions. In some cases, sales are not possible for bids so low that the proceeds do not cover the delinquent

³⁹ McClary, 2010.

taxes. In these cases, the county treasurer must "charge back" the losses to the local governments within that county. These charge backs represent a potential hit to a local unit's revenue.

Special Assessments

Special assessments are a means of raising money in a restricted area to pay for the cost of local improvements made either in that immediate area or sufficiently near to it to result in economic benefit to the property in that area.⁴⁰ Property taxes and special assessments, although based on different legal theories, both represent the taxation of land and improvements.

Special assessments are more widely used in Michigan townships. This is partly because, especially in general law townships, there are significant restrictions on general tax capacity and there is often undeveloped infrastructure unlike a more urban center. Several laws allow townships, cities, and villages to levy a special assessment for specific purposes such as roads, water and sewer systems and other specific projects and facilities.

The relationship of the property tax and special assessments, even more so to land and improvements, implies that speculation on future improvements plays an important role in the local government decision-making process. This speculation backfired when the economic crisis hit and development projects were no longer profitable.

In Florida, for instance, so called "dirt bonds" were undertaken in which developers piled up debt to finance roads, sewers, and golf courses during the boom years of 2004-2006 often using little or no money of their own. They also did not use money from the homeowners in these areas because they were not yet in existence. Once the crisis hit and property values plummeted, many developers went into default and foreclosed. In Lee County alone, \$1.2 billion of its bonds are distressed or in default. The development called "The Quarry" in North Naples just defaulted on a \$219.2 million dirt bond in which the value of the bond is five times the actual value of the real estate.⁴¹ Florida

⁴⁰ Winter, 1952

⁴¹ Hogan, 2010

has now instituted regulations on building projects in which projects of 1,000 acres or more must be approved by the Florida cabinet before they can be built and smaller projects must be approved by their municipality in which they are built. This regulation is mostly likely too late to affect the current crisis, but may prove useful in preventing such defaults in future crises.

In some cases, defaults such as these are only liens against the property of the benefit district, in which case the investor is the loser. In others, the bonds are a contingent obligation upon the city at large in which case the general public foots the bill.⁴² In California, for instance, special assessment bonds are in trouble in areas where development projects were undertaken during the boom years in expectation of continued growth. For instance, a \$1.89 million bond issued by the City of Chowchilla went into technical default in July after the City no longer had sufficient funds to pay for the Civic Center which it was used to build.⁴³

Similar situations have occurred in Michigan in which local governments undertook speculative bonds related to special assessment projects on which they subsequently were unable to make payments. Other situations also occurred in which local governments took out bonds to build water mains and other types of infrastructure for these developers who eventually pulled out, leaving city investment in unusable areas. In Livingston County, for example, about half of the townships have outstanding special assessment debt. The State as a whole owes more than \$1.0 billion in debt to repay water, sewer and road debt.

According to data from the Municipal Advisory Council of Michigan, there were approximately \$456.2.0 million in special assessment-backed municipal bonds issued by local units from 2003 through 2010. This figure only represents the direct special assessment bond obligations. Indirect debt is that which issued by one level of government on behalf of another level of government. The rationale is that a higher level government can reduce the cost and use its financial strength to lower the cost for the lower level unit of government. According to statistics compiled, it is known that at least 131 cities and townships in Michigan had indirect special assessment debt issued on their behalf between 2003 and 2010. It is unknown as to the total dollar amount of those issuances.

⁴² Winter, 1952

However, it is likely that these indirect issues would double or triple the amount of directly issued special assessment debt.

DEBT-BASED FISCAL STRESS STUDY METHODOLOGY

The analysis conducted here was aimed at uncovering the potential degree of stress and risk associated with the general obligation municipal debt issued by local governments in the State of Michigan. The particular focus of this analysis is on debt repayment and cash flow stresses across a select sample of local governments within Michigan.

The following section describes the data collected and the fiscal stress indicator system generated. It should be noted that this system differs from the current Michigan Department of Treasury fiscal indicator system. This system specifically focuses on debt-type measures whereas the Treasury system has only one debt measure. These two fiscal indicator systems should be seen as complementary in their focus.

Debt-Based Fiscal Stress System

The debt-based fiscal stress system proposed here is designed to capture debt service burden and the cash flow capacity of local units of government to handle this debt service burden. Debt service is the total principal and interest payments needed each year to repay the debt. It is therefore, specifically focused on short-term debt capacity as opposed to assessing long-term debt stress for example. Further, the system does not propose to be able to capture overall fiscal health of a local unit of government. The Michigan Department of Treasury currently has a fiscal scoring system that addresses overall fiscal health.

The proposed analysis uses five indicators. Each of these indicators has a threshold measurement against which the local government unit is scored.- if Any time a local unit of government exceeds a threshold or target value, it receives a point on this fiscal stress system for that indicator. The

⁴³ Swarts, 2010

local unit is tested against the threshold of each of the five indicators and the total points are tallied to receive the final score. The final scores place the local unit in a ranking category of low-, medium-, or high debt service stress.

Table 1: Debt Based Indicator System

Stress Category	Points Scored
Low	0-2
Medium	3-4
High	5

The first indicator is special assessment debt. Any local unit which had special assessment backed debt issued in 2003 and later incurred one point on the indicator system. Special assessment backed debt was often used to support new housing or commercial developments by extending infrastructure to that development. 2003 was chosen as a threshold year since developments begun prior to 2003 were assumed to have been completed and thus the concentration risk of the assessment had been spread to a number of property owners versus a single developer. The revenue supporting debt issued by the county on behalf of the local unit (indirect debt) was not identifiable and therefore all indirect debt was assumed to be special assessment debt.

The second indicator is TV divided by SEV. This variable gives an indication of how close the TV is to equaling the SEV. The closer TV is to SEV the more rapidly property taxes may decline. This is a crucial indicator because property taxes represent the most own-source revenue for local governments in Michigan. Declining property taxes would represent one aspect of a reduction in cash flow to the government in question. The target or threshold value of 90.0% was chosen since other research indicated this was the point where local government units begin to experience declining property taxes. Thus any unit with a current ratio greater than 90.0% receives one point in the fiscal stress system.

The third indicator is real property tax and special assessment delinquencies. County treasurers were contacted in each of the sample counties to provide delinquent tax data for FY 2009-10. This data includes the total amount of all real property and special assessment delinquent taxes for each city, township, and village within that county. Because delinquent taxes will be charged back to a township or city if they are uncollected by the county, this variable represents another reduction in cash flow to the local government in question. The delinquency figure was converted to mills and any unit whose delinquencies were greater than threshold of 1.5 mills received a point on the indicator system. Given the difficulties surrounding the tax foreclosure and process; this variable has sparked renewed attention recently.

The fourth indicator is the percentage of debt service relative to revenue for governmental funds. This variable measures a unit's current ability to repay its debt. Debt service was defined as all governmental fund debt payments of the local government. Revenue was defined as all sources of revenue within the entirety of the governmental funds. The source of the revenue data was the Michigan Department of Treasury's F-65 system. Debt service was then divided over governmental fund revenue. If a local unit's ratio exceeded the 15.0% threshold, the governmental unit received one point on the fiscal stress index.

The final indicator is direct and indirect bonded debt relative to taxable value. Taxable value is the best proxy for capacity of a unit to repay its debt over the long run. Certain State laws limit total debt relative to SEV. However, the committee felt that TV, the true measure of taxing capacity and therefore tax revenue, was a better fiscal stress measure. For this ratio, total general obligation debt was divided by total TV of the governmental unit. If this debt leverage ratio is greater than 6.0%, the unit is given a point on the fiscal stress index.

Once all variables are calculated; the points are added together to give each unit a final score. If the unit's final score is a 1, the unit is regarded as having a low level of debt service stress. If it is 2, the unit has a medium level of debt service risk. And if it is 3 or above, the unit is regarded as having a high debt service stress. This scoring mechanism is only the first step in analyzing the debt service stresses of these communities. Once units are flagged as experiencing a medium or high level of debt related stress, further analysis and investigation was deemed warranted.

Any macro scale fiscal stress system can only take an analyst or investigator so far in understanding the specific challenges facing a local unit of government. A macro scale system, if properly applied, can help sort out and differentiate between serious and stable cases. However, it is always possible that a macro scale system will result in two potential errors: 1) missing potential problem cases and 2) classifying as high stress a government that is not. The first error is more difficult to catch in a macro scale system. The second error can be caught through the careful case study analysis of those governments that were classified as high- or medium-stress. In the following approach attempted to determine the extent of the second type of errors.

It is important to clarify a distinction between the term 'risk' and 'stress' as used in this analysis. The term 'stress' refers to a situation in which conditions exist that could place a local unit of government in a difficult spot to meet all of its obligations. Generally, we believe that stress can be represented using a numerical scoring system that quantifies stress across a set of common variables. This system can be applied to many local units of government and can even be use to compare stress across governments.

The term 'risk' is used here to denote the interaction between quantifiable 'stress' factors and a government's response to those stresses. In other words, if a government is failing to address stress factors, it is then at risk, perhaps great risk depending on the circumstances, to be unable to meet all of its spending obligations. Risk then is a function of less easy to quantify and less easy to observe actions. These actions may include reducing other discretionary obligations or shifting the burden of obligations.

The numerical scoring system presented in this analysis is an example of measuring fiscal stress. It is particularly targeted to the ability of local units of government to manage revenue and cash flow to meet debt service obligations. The case studies that followed the macro debt indicator analysis it assessed the actions and preparations of local officials in response to the existing debt service stress situation.

Data Compiled

The first step in the analysis was to compile all available debt for the cities, villages and townships within the county areas deemed to be in a high stress situation due to recent high development activity or other stress factors. The Municipal Advisory Council (MAC) of Michigan was the only reliable source of outstanding debt information. Data was compiled for the major cities, villages, and township in twenty three Michigan counties. A total of nearly 700 local general purpose governments were examined. The time period covered by the data varies by data source. The F-65 FY 2008-09 data was used to find the total governmental funds revenue and debt service information. . MAC of Michigan supplied current available 2010 outstanding debt figures. County assessing 2010 TV and SEV data was utilized. County Treasurers supplied 2009 tax year delinquency information.

As the project commenced, data problems became evident. The F-65, while the only comprehensive local government financial database, has problems with data input errors and some missing units. Future research is needed to cross check the F-65 data base with financial audits. Financial audits are highly useful documents, but their reporting inconsistencies across units of government make them very difficult in tracking large numbers of governments and are mainly useful in a case study context.

A second data problem relates to finding information on outstanding debt obligations of all types. The Municipal Advisory Council does not have access to all debt obligations incurred by local governments such as leases or purchase contracts. As a result the debt totals in the indicator test only include bonded debt. This affects the ability of an analyst to assess the overall debt burden capacity. These related data challenges are an important factor in understanding the overall results of this analysis and study that will be discussed in the next sections.

Third, debt information is not collected by supporting revenue streams which made it difficult to find debt backed by special assessments.

A fourth data problem related to the inability of county treasurer departments to supply the correct property tax and special assessment delinquency information.

The previously described methodology was applied to a sample of local governments from across Michigan. The initial sample was generated with 30 counties. Ultimately, due to data availability a total of 23 counties were analyzed with adequate data. The final sample includes 728 cities and townships. Villages were excluded due to the inconsistent availability of data.

The sample of 23 counties covers nearly 70.0% of Michigan's population and tax base. Some sample statistics will help better describe the sample group under analysis here. The governments presented here collected a total of \$6.5 billion in governmental revenue. They had a total of \$350.0 million in debt service payments on an annual basis in FY 2009-10. The total estimated delinquent tax charge backs totaled to \$240.0 million for these local governments as reported by their county treasurers. In total, these governments had accumulated \$5.5 billion in debt - some of this debt is secured by enterprise funds and those fund stresses are not accounted for in this analysis.

One of the first indicators in the fiscal stress system was related to the existence of special assessment debt. Of the total units in the sample, 175 units were recorded as having direct or indirect special assessment debt. This compares with the 456 units that had some kind of debt at all.

Several indicators in the fiscal stress system were focused on debt measures. The first debt measure was total bonded debt compared with TV. Among this sample group, the average level of debt compared with TV was 1.3%. Given that our target threshold for the fiscal stress system was 6.0%; this meant that many governments did not score a point in this indicator. In fact, only 31 out of the 750 local units scored a point. In aggregate, this would probably be considered a fairly manageable number. Looking at the extremes, many local units had no debt and some units had debt service as high as 10.0% of TV.

A second debt-related measure was the percentage of annual governmental fund debt service payments as compared with total governmental revenue. In this case, the average value across all governments was 5.0%. Across the spectrum, some governments had no debt service and others

had a value as high as 40.0% of total revenue. Sixty-three local units had debt service greater than 15.0% which was the target threshold established in the fiscal stress system presented here.

There were several indicators in the fiscal stress related to property values and taxes. The ratio between TV and SEV was a stress factor. In this case, 240 local units of government scored a point. This is not surprising given the statewide fall in property values over the past few years. Another indicator related to property values and taxes was the delinquent tax indicator. Here, 170 of the local units had potential charge backs from county treasurers equal to 1.5 mills or more of their tax base and scored a point.

Each of these units was scored using the fiscal stress indicators described in the previous section. Any local unit of government that scored three points or four points was classified at medium debt service stress. . Those that scored five points were classified as high stress. This first round of analysis produced a list of 78 local governmental units who were deemed to be at medium- or high-stress with regards to debt service capacity. The high-stress and medium-stress units were then segregated and second tier analysis was completed.

The second tier analysis was the cross checking of the debt-based fiscal stress indicators with the current Michigan Department of Treasury fiscal indicator system (for a description, see Senate Fiscal Agency Issue Paper, 2010). The second tier result included units who scored medium or high in the debt service fiscal stress system and who also scored at medium- or high-level on the Michigan Department of Treasury fiscal scoring system. Some units were included, who although scoring low on the Treasury scoring system, were still deemed at a high-stress level on the debt service system.

After the cross checking with the Michigan Department of Treasury system, a total of 42 local units were selected for further stress and risk analysis. With this group of 42 local units, a series of case studies was conducted to 1) verify the accuracy of the debt stress indicator data and 2) determine the potential risk of any of the units' inability to manage their debt service stresses. The terms stress and risk refer to how they were defined earlier in this study.

Case Study Results

Out of the 42 local units initially identified, a group of 18 communities were contacted for further information and analysis. This is the risk assessment portion of the analysis. This report can only address the risk issue as identified in these 18 communities and does not purport to represent the conditions in the remaining 24 communities. Further, the information provided here from the 18 communities analyzed are for illustrative purposes only and do not constitute an opinion as to the soundness or circumstances underlying these local units of government.

There are number of actions that local governments are taking in order to address their debt burdens, particularly those related to special assessment debt.

- Multi-year budgeting to determine extent of problem
- Millage request - denied. Closed down Police Department and subcontracting from nearby township. Annual cost savings of \$150,000. General fund now able to support expenditures.
- Millage request for Fire since General Fund is paying Water debt - approved for four years.
- Millage request for debt service - November 2010 – denied.
- Push back asset replacement/downsize asset replacement plans.
- Implemented target fund balance goal over the next five years and reducing expenditures to meet that goal
- Reassess the special assessment district
- Reduced public safety staff
- Reduced entire local unit staff by 25.0%
- Increased medical co-payments
- Increased employee retirement contributions
- Increased water and sewer rates
- Refunding of bonds with net present value savings and debt term extended by 10 years.

- Received ARRA grant funds
- One-time transfers from General and other funds
- Hired experienced accounting staff

The various case studies do not lend themselves to any large scale conclusions regarding the potential risks associated with municipal debt defaults or failures in Michigan at the time. Lack of data availability and completeness has hampered our ability in this analysis to make any firm conclusions.

One outcome of this analysis is that the debt capacity analysis offered here seems to present a robust model for assessing macro scale municipal debt stress. It should be noted that the case studies did help validate the debt and debt service capacity model presented here.

CONCLUSION AND SUMMARY

Municipal finances have been extraordinarily strained since the Great Recession of 2008-09 began. While, the recession ended in the fall of 2009, the aftermath of its impact will continue in the public sector for some time to come. In fact, many argue that the worst of the local government fiscal crisis will be forthcoming. A combination of revenue sharing reductions and declines in property taxes has been major contributors to this strain and will continue in the future. This has raised some concerns regarding the safety and security of municipal bonds issued by Michigan governments. These bonds are often secured by local property taxes, user fees or special assessments. Given some of the problems in other states and in the housing market in general, a general assessment of the Michigan municipal bond market was warranted.

Generally, municipal bonds, and particularly Michigan municipal bonds, have been a safe investment. Michigan has had no defaults in well over 50 years. In order to take a proactive stance, this report attempted to assess the potential stress on local governments who have issued debt; especially special assessment debt. In some cases, this special assessment debt was issued on the premise of new housing developments that never occurred.

A debt capacity stress system was developed for this study. Using five indicators and a numerical scoring system, the system was tested to determine the potential level of risk of municipal defaults in Michigan. However, data limitations have limited our ability to make any firm conclusions at this time.

An examination of a select group of local city and township governments was conducted on 18 of these local units. These case studies do not provide any definitive conclusions as to the potential risk of default. However, they have served to help validate the debt capacity stress system. This model should be further developed by the State. It would serve as a very useful tool to complement the existing Michigan Department of Treasury fiscal indicator system.

Perhaps the most telling aspect of this report is the lack of data availability and accuracy that makes this exercise particularly difficult and problematic. The State and local governments of Michigan are nearly a \$100.0 billion enterprise. Collectively, they borrow multi-billions of dollars. An analyst seeking information on any individual government and its borrowings via the financial audit or other sources can do so. However, there are over 1,800 general purpose governments in Michigan. It is simply extremely difficult to undertake any type of collective analysis on debt trends across these governments.

The fiscal stress indicator system, with a specific focus on debt, has been put forward as a complementary system to the current Michigan Department of Treasury fiscal indicator system. Where it has been possible to validate this system via case study analysis, it has been proven its worth in assessing the existence of financial stress via general obligation debt burden. Given the extensive nature of the fiscal problems facing Michigan local governments, this type of debt-based fiscal indicator system could have significant benefits to the State in its role of overseeing local government finances.

In generating such a system however, data limitations are a significant barrier as previously discussed. To enact such a system, it is recommended that the various units such as the Municipal Advisory Council of Michigan and the Michigan Department of Treasury work together to ensure

the State has a comprehensive, adequate, and accurate system for identifying municipal debt of all types and by various categories – concentration risk, revenue risk, etc..

As discussed earlier in this report, some local units of government are taking actions to address their debt challenges. If significant or even isolated bond payment issues do arise in the State, a question remains as to the potential role of State government in addressing these problems. Bond refunding is when one series of bonds that has been issued by a local government is paid off by another bond issuance. Such a strategy allows a local government to refinance or restructure its debt and lower its annual outlays thus reducing pressure on the budget. Typically, this does mean that the local unit will pay more in total debt over the course of the life of the bond. House Bills 5550 through 5554 of 2009 were introduced and passed by the Michigan Legislature under such a concept.

A second option would be the possibility of the State intervening directly and providing access to financing for distressed municipalities. House Bill 6181 of 2010 was introduced with such a concept in mind. The bill would create a revolving loan fund that could be accessed by municipalities in distress under certain conditions. These two options present policy makers with some of the possibilities for State involvement in potential local government debt challenges.

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APPENDIX A: LEGAL TERMINOLOGY

PA 79

"Municipality" means any local unit of government of this State which may now or may hereafter operate any public utility pursuant to law for the purpose of supplying bus or street railway transportation, including all plants, works, instrumentalities, and properties used or useful in connection with the operation of any public utility for the purpose of supplying street railway or bus transportation, except any gas or electric utility, or water supply systems, including all plants, works, instrumentalities, and properties used or useful in connection with obtaining a water supply system, the treatment of water or the distribution of water, or both, except any gas or electric utility.

"Governing" means the council, common council, or commission of a municipality.

"Fiscal year" means the 12-month period as may be determined by statute, charter, or ordinance as the fiscal year of the municipality.

PA 243

"Board" means the local emergency financial assistance loan board created under this act.

"Fiscal year" means, unless otherwise provided in this act, the fiscal year of the municipality applying for a loan under this act.

"Income tax collections" means the total collection of a municipality under the city income tax act, 1964 PA 284, MCL 141.501 to 141.787, in any calendar year.

"Income tax revenue growth rate" means the quotient of the following:

- The numerator is the income tax collections of the municipality for the calendar year immediately preceding the calendar year used in determining the numerator.
- The denominator is the income tax collections for the municipality for the calendar year preceding the calendar year used in determining the numerator.

"Municipality" means a county, city, village, or township of this State

"Local tax base growth rate" for a municipality means the State Equalized Valuation (SEV) of the real and personal property of the municipality for the most recent year for which data is available divided by the SEV of real and personal property of the municipality for the fifth year preceding the most recent year for which data is available

"Statewide tax base growth rate" means the total SEV for the real and personal property for the most recent year for which data is available divided by the total SEV for the fifth year preceding the most recent year for which data is available.

"State equalized valuation of real and personal property of the municipality" means the valuation determined under 1911 PA 44, MCL 209.1 to 209.8, of real and personal property within the municipality plus an amount equal to the SEV equivalent of certain revenue of the municipality as determined under this subdivision. The SEV equivalent shall be calculated by dividing the sum of the following amounts by the municipality's millage rate for the fiscal year:

- The amount levied by the municipality for its own use during the municipality's fiscal year from the specific tax levied under 1974 PA 198, MCL 207.551 to 207.572.
- The amount levied by the municipality for its own use during the municipality's fiscal year from the specific tax levied under the Commercial Redevelopment Act.

PA 34 of 2001

"Assessed value", "assessed valuation", "valuation as assessed", and "valuation as shown by the last preceding tax assessment roll", or similar terms, used in this Act, any statute, or charter as a basis for computing limitations upon the taxing or borrowing power of any municipality, mean the SEV as determined under the General Property Tax Act, 1893 PA 206, MCL 211.1 to 211.157.

"Chief administrative officer" means that term as defined in section 2b of the Uniform Budgeting and Accounting Act, 1968 PA 2, MCL 141.422b.

"Debt" means all borrowed money, loans, and other indebtedness, including principal and interest, evidenced by bonds, obligations, refunding obligations, notes, contracts, securities, refunding securities, municipal securities, or certificates of indebtedness that are lawfully issued or assumed, in whole or in part, by a municipality, or will be evidenced by a judgment or decree against the municipality.

"Debt retirement fund" means a segregated account or group of accounts used to account for the payment of, interest on, or principal and interest on a municipal security.

"Deficit" means a situation for any fund of a municipality in which, at the end of a fiscal year, total expenditures, including an accrued deficit, exceeded total revenue for the fiscal year, including any surplus carried forward.

"Department" means the Michigan Department of Treasury.

"Fiscal year" means a 12-month period fixed by statute, charter, or ordinance, or if not so fixed, then as determined by the Department.

"Governing body" means the county board of commissioners of a county; the township board of a township; the council, common council, or commission of a city; the council, commission, or board of trustees of a village; the board of education or district board of a school district; the board of an intermediate school district; the board of trustees of a

community college district; the county drain commissioner or drainage board of a drainage district; the board of the district library; the legislative body of a metropolitan district; the port commission of a port district; and, in the case of another governmental authority or agency, that official or official body having general governing powers over the authority or agency.

"Municipal security" means a security that when issued was not exempt from this act or the Municipal Finance Act, 1943 PA 202, MCL 131.1 to 139.3, by the provisions of this Act or by the provisions of the Municipal Finance Act, 1943 PA 202, MCL 131.1 to 139.3, or by the provisions of the law authorizing its issuance and that is payable from or secured by any of the following:

- Ad valorem real and personal property taxes
- Special assessments
- The limited or unlimited full faith and credit pledge of the municipality
- Other sources of revenue described in this act for debt or securities authorized by this act.

"Municipality" means a county, township, city, village, school district, intermediate school district, community college district, metropolitan district, port district, drainage district, district library, or another governmental authority or agency in this State that has the power to issue a security. Municipality does not include this state or any authority, agency, fund, commission, board, or department of this State.

"Outstanding security" means a security that has been issued, but not defeased or repaid, including a security that when issued was exempt from this Act or the Municipal Finance Act, 1943 PA 202, MCL 131.1 to 139.3, by the provisions of this act or by the provisions of the Municipal Finance Act, 1943 PA 202, MCL 131.1 to 139.3, or by the provisions of the law authorizing its issuance.

"Qualified status" means a municipality that has filed a qualifying statement under section 303 and has been determined by the Department to be qualified to issue municipal securities without further approval by the Department.

"Refunding security" means a municipal security issued to refund an outstanding security.

"Security" means an evidence of debt such as a bond, note, contract, obligation, refunding obligation, certificate of indebtedness, or other similar instrument issued by a municipality, which pledges payment of the debt by the municipality from an identified source of revenue.

"Sinking fund" means a fund for the payment of principal only of a mandatory redemption security.

"Taxable value" means the taxable value of the property as determined under section 27a of the General Property Tax Act, 1893 PA 206, MCL 211.27a.