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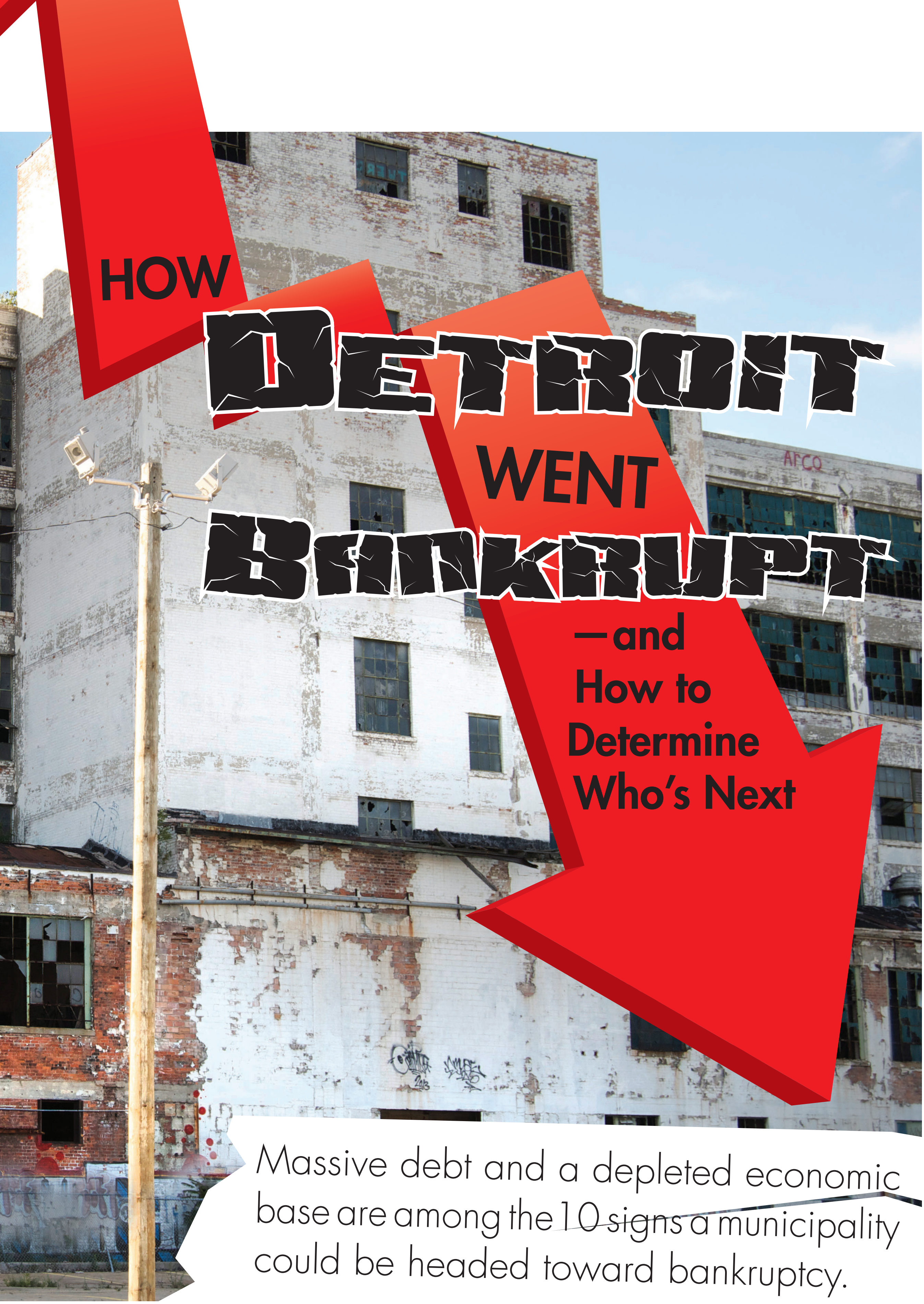
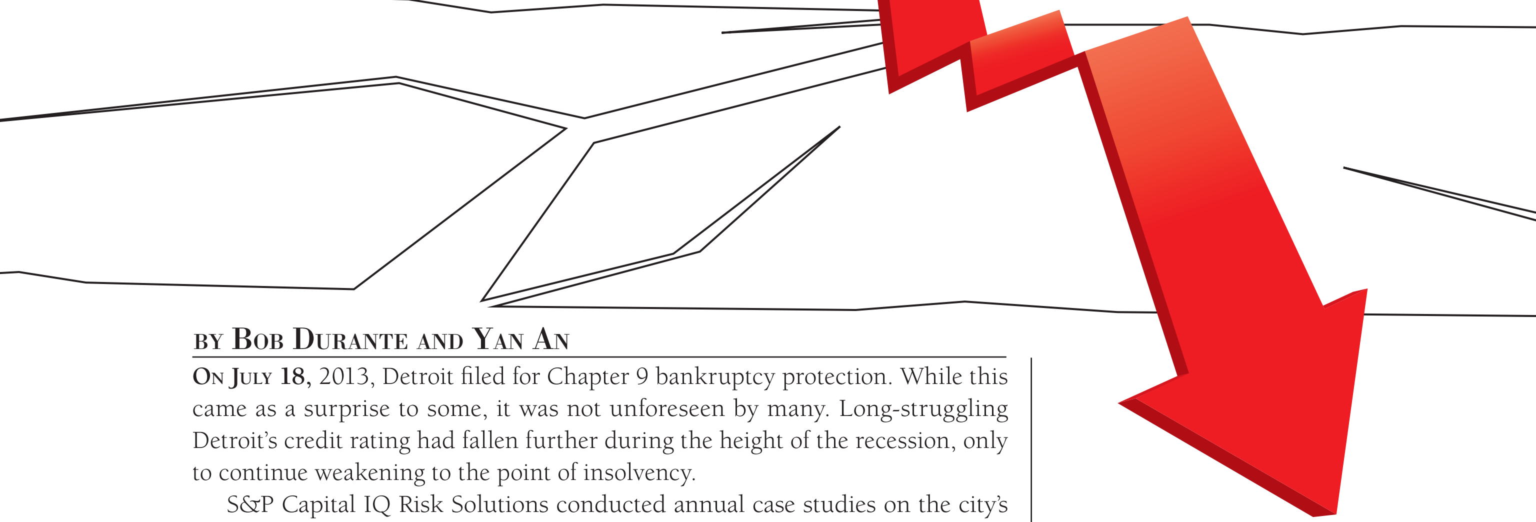


HOW DETROIT WENT BANKRUPT

—and How to Determine Who's Next

Massive debt and a depleted economic base are among the 10 signs a municipality could be headed toward bankruptcy.



By Bob Durante and Yan An

On July 18, 2013, Detroit filed for Chapter 9 bankruptcy protection. While this came as a surprise to some, it was not unforeseen by many. Long-struggling Detroit's credit rating had fallen further during the height of the recession, only to continue weakening to the point of insolvency.

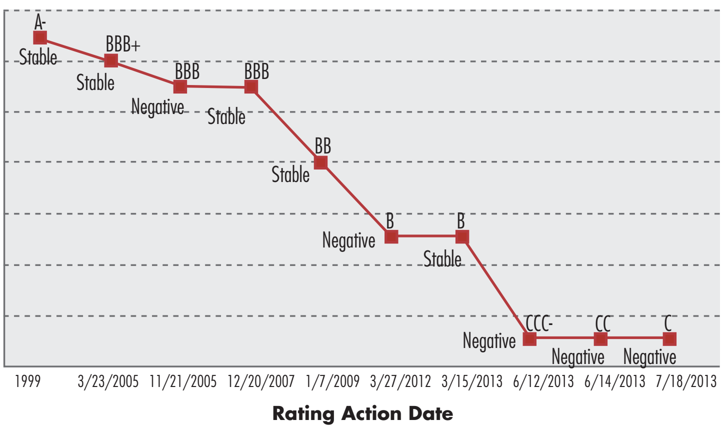
S&P Capital IQ Risk Solutions conducted annual case studies on the city's general obligation (GO) debt. Figure 1 shows Standard & Poor's rating history for Detroit's GO bonds from 1999 to 2013. Starting in 1999, Detroit experienced seven rating actions (either downgrades or downward outlook revisions). In 1999, the city's GO bond had an "A-" rating. An obligation in the "A" category is considered more susceptible to the adverse effects of changing economic conditions than obligations in higher-rated categories like "AA." However, the obligor's capacity to meet its financial commitment is still seen as strong.

By the end of 2007, Detroit's GO bond rating had dropped to "BBB" with a negative outlook. The city's credit profile deteriorated further during the 2008-09 recession, and by March 2012 the city's GO bond had been downgraded to a "B" rating with a negative outlook. On July 18, 2013, the rating dropped to "C" with a negative outlook after the city filed for bankruptcy.

A "C" rating, in general, is assigned to 1) obligations that are highly vulnerable to nonpayment, 2) obligations that have payment arrearages allowed by the terms of their documents, or 3) obligations of an issuer that is the subject of a bankruptcy petition or similar action, but has not yet experienced a payment default.

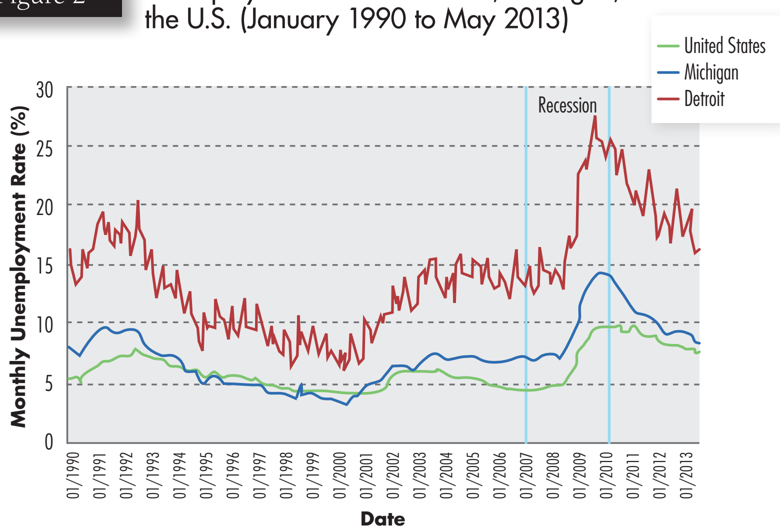
How did Detroit, a major business, cultural, financial, and transportation hub in the 1950s, become the largest U.S. city to file for bankruptcy protection?

Figure 1 Detroit's GO Bond Rating and Outlook History (1999 to 2013)



Source: S&P Capital IQ Global Credit Portal

Figure 2 Unemployment Rate for Detroit, Michigan, and the U.S. (January 1990 to May 2013)



Source: Bureau of Labor Statistics

Lessons Learned: How Detroit Went Bankrupt

Standard & Poor's methodology for local government ratings focuses on a range of economic, management, budgetary, and financial factors. These factors are evaluated not in isolation but in combination. The general approach

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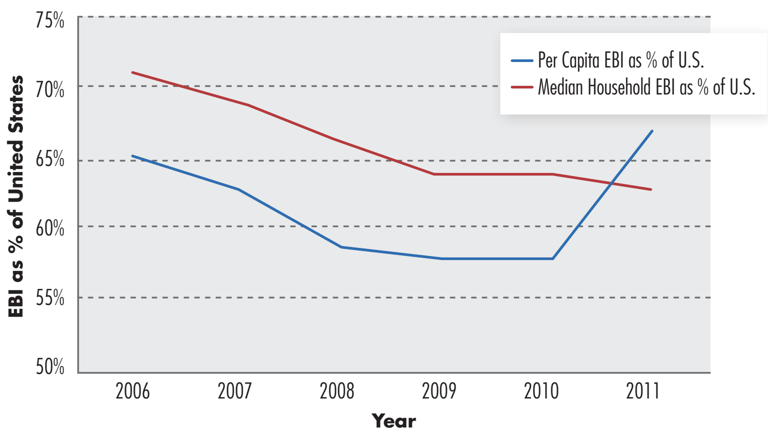
Figure 3 Detroit's Effective Buying Income as % of U.S. EBI (2006 to 2011)



Source: S&P Capital IQ Global Credit Portal

for municipal issuers takes into account the characteristics of the U.S. governmental system, as well as local and regional economic factors.

Detroit's economic strength has been in serious decline, and the city's depleted economic base, massive debt burden, and below-average financial management are the key drivers of its weak credit profile.

- **Depleted Economic Base**

Detroit has the weakest economic base of any large U.S. city. The unemployment rate was 16.3% in May 2013, more than double the U.S. average and higher than that of any other large city in the nation. Figure 2 tracks the unemployment rate for Detroit, the state of Michigan, and the U.S. from January 1999 to May 2013.[1] Average unemployment rates for the 281 months in this period are 6.1% for the U.S., 7.2% for Michigan, and 14.1% for Detroit. Detroit's unemployment rate has been more than double the rates of the U.S. and Michigan over the past decade.

During the most recent recession, Detroit's unemployment rate reached a peak of 27.8% in July 2009 and averaged 24.6% from January 2009 to June 2010.[2] S&P expects the unemployment rate for the East North Central region, which includes Illinois, Indiana, Michigan, Ohio, and Wisconsin, to remain high in 2013, at 7.97%.[3]

In addition, Detroit's income levels, which are a strong predictor of its capacity to repay debt, are the lowest of any large U.S. city. From 2007 to 2011, Detroit's per capita income was $15,261, compared with $25,482 for the state of Michigan. About 36.2% of Detroit's population lives below the poverty line, compared with 15.7% for the state as a whole.[4]

Consider effective buying income (EBI), defined as personal income (wages, salaries, interest, dividends, profits, rental income, and pension income) minus federal, state, and local taxes and nontax payments (such as personal contributions for social security insurance). Projected EBI per capita as a percent of the U.S. number and market value per capita are important factors in assessing the credit quality of a municipality.

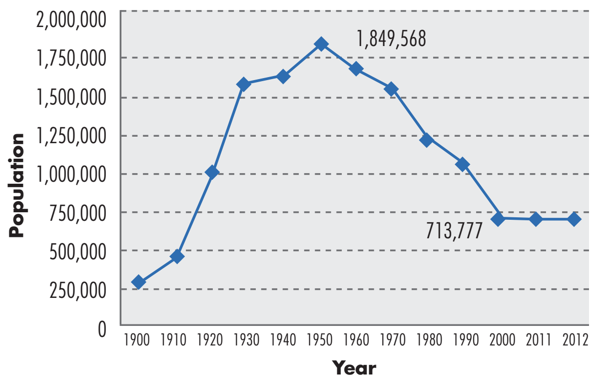
Detroit's median household EBI was 71%[5] of the U.S. level in 2006, as shown in Figure 3. Over the years, the measure has deteriorated significantly, dropping to 64% in 2009 and 63% in 2011. The city's per capita EBI was 65% of the national level in 2006, decreasing to around 58% during the 2008-09 recession. In Detroit, the percentage of the population aged 25 or older and with a bachelor's degree or higher is only 12.2%, compared with 25.3% for the entire state.[6]

The city's depleted economic base, massive debt burden, and below-average financial management are the key drivers of its weak credit profile.

Furthermore, Detroit has experienced the greatest population loss of any large U.S. city over the past 25 years. Figure 4 shows the historical population of Detroit from 1900 to 2012. The city's population increased from less than 300,000 in 1900 to over 1.8 million in 1950.

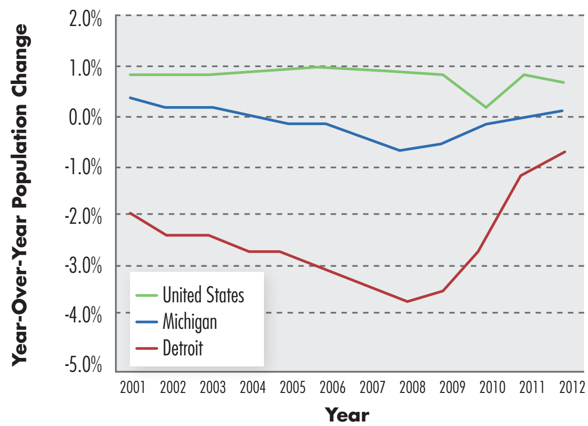
In the 1950s, the city was the center of U.S. auto manufacturing and home to about one-third of Michigan's popu-

Figure 4 Detroit's Historical Population (1900 to 2012)



Source: 1900 to 1990: Southeast Michigan Council of Governments; 2010 to 2012: Census Bureau

Figure 5 Year-Over-Year Population Change for Detroit, Michigan, and the U.S. (2001 to 2012)



Source: Census Bureau

lation. But soon after, the city's population began to drop precipitously. By 2010, it had dropped 61%, to 713,777. Figure 5 shows Detroit's estimated year-over-year population change from 2001 to 2012 compared with the state of Michigan and the U.S. The region's economic conditions, relative to the rest of the country, affect population movements. The city experienced severe out-migration in the past few decades, which has had a negative impact on real estate values. The median value of owner-occupied housing units was recently only $71,100, compared with $137,300 for Michigan.[7]

The city has a large number of retirees relative to active employees, which adds additional pressure to its debt position.

- **Massive Debt Burden and Contingent Liability**

Detroit has massive direct debt. As of June 2012, the city's direct debt totaled $8.53 billion.[8] When the city filed for bankruptcy in July 2013, the total debt burden was estimated to be about $18 billion by emergency manager Kevin Orr.[9] Figure 6 shows a comparison of Detroit's direct debt with its governmental funds revenue from 2006 to 2012. Governmental funds revenue remained below $2 billion from 2006 to 2012, while direct debt floated around the $8 billion level during the same period.

In addition to direct debt, if a municipality has unaddressed exposures to large unfunded pension or other post-employment benefit (OPEB) obligations—which can lead to accelerating payment obligations over the medium term and significant budget pressure—analysts should investigate what the government plans to do about them.

Detroit has significant unfunded pension and OPEB liabilities. As of June 2011, the city had an unfunded pension liability of $646 million.[10] For 2013, pension and retiree expenses represent about 17.4%[11] of the general fund's budget. Although not the case with debt, the government generally has some flexibility to change the level of pension benefits by paying less than the required contribution amount. However, such delays are only a temporary solution, and the municipality would need to pay more in future years to catch up. In Detroit's case, the city has a large number of retirees relative to active employees, which adds additional pressure to its debt position.

- **Years of Financial Mismanagement**

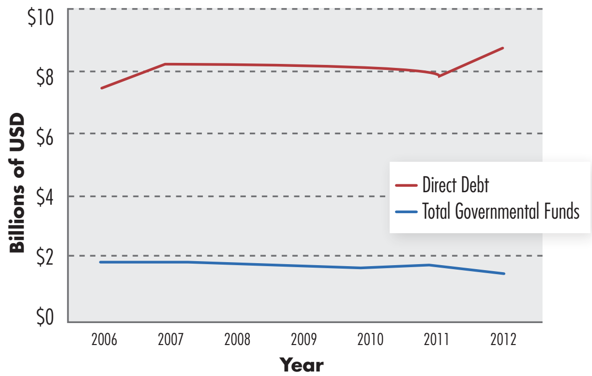
When evaluating the credit profile of municipalities, it's important to assess the impact of management conditions on the likelihood of repayment. Areas such as budgetary performances, long-term financial and capital planning, debt management policies, investment management policies, liquidity policies, and so on should be examined. The focus of the analysis should be on the municipality's ability to handle financial policies, rather than individual managerial quality or organizational efficiency. If a management team lacks the relevant skills to adequately plan, monitor, and manage the government's finances, this could indicate higher risks.

Budgetary performance and flexibility are also important risk dimensions that could be used to assess the credit quality of the city's obligations. The net general funds result is defined as total general fund revenues minus total general fund expenditures (plus transfers in from other funds and minus transfers out to other funds). The net general funds result is an important factor in the assessment of city and county budgetary performance.

Figure 7 shows Detroit's general fund results from 2006

Figure 6

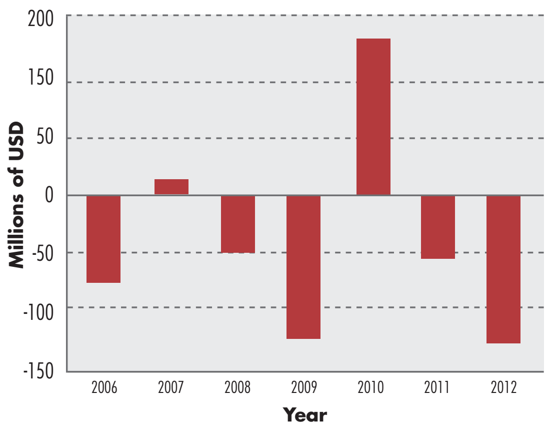
Detroit's Direct Debt Versus Total Governmental Funds Revenue (2006 to 2012)



Source: S&P Capital IQ

Figure 7

Detroit's Net General Funds Results (2006 to 2012)



Source: S&P Capital IQ

to 2012. The net general funds result was -$121.6 million in 2012 and -$56.9 million in 2011. The available fund balance as a percentage of expenditures can be used as a starting point to assess the budgetary flexibility of the city and county's credit quality. Detroit's unassigned fund deficit as a percentage of operating expenditures deteriorated to -32.8% in 2012,[12] down from -18.4% in 2011.

- **No White Knight, No Bond Support from Michigan**

For Detroit, there appears to be no "white knight" coming to repay the city's general obligation bonds. The white knight could be either the state or federal government, but neither is obligated nor expected to step up and meet bondholder payments.

Distinguishing Between General Obligation and Revenue Pledges

A general obligation bond[13] is a full-faith-and-credit direct obligation of an issuer, not subject to appropriation risk: The obligor is legally required to appropriate money to repay the debt. GO bond issues are often decided by a vote, and city and county bond issues are often accompanied by a voted-upon property tax rate sufficient to repay the bonds. The property tax levy for bonded debt service is usually collected by an independent county tax collector, and the receipts are paid directly to the bond trustee without passing through city or county accounts.

For Detroit, there appears to be no "white knight" coming to repay the city's general obligation bonds.

If taxpayers refuse to pay their property taxes, their homes or businesses may be seized and sold for back taxes. If the issuer refuses to levy taxes sufficient to repay the bonds, the trustee can use the legal process of mandamus to force a levy. In general, the GO pledge is the strongest form of municipal security in the United States.

Revenue bonds[14] are bonds backed by a specific revenue stream, as defined in the bond indenture. Typical revenues supporting local government revenue bonds include sales taxes, gas taxes, and utility fees. The credit analysis of revenue bonds is different from the methodology used for property-tax-supported debt, focusing instead on coverage of the maximum annual debt service by current and projected revenues, the economic trends underlying revenue projections, and the legal analysis of covenants restricting the future issuance of other revenue bonds on parity with the outstanding debt.

In general, GO bonds provide an unlimited full-faith-and-credit pledge. However, in bankruptcy, the GO pledge almost becomes the equivalent of an unsecured pledge. Given the essentialness of water and sewer assets, and the ability of the bondholders to claim those assets, the city could choose to continue making payments for its water and sewer revenue bonds instead of its GO bonds.

Will this make us rethink the traditional general obligation pledge, viewed for years as stronger than a revenue pledge? The answer is, not necessarily. It depends on the regulation, the importance of the assets used to secure the revenue pledge, the influence of the creditor, the negotiating power of the municipality, and other factors. However, it is a pattern that S&P Capital IQ will continue to monitor if and when other municipalities with GO debt declare bankruptcy.

An Isolated Event—or the Start of a Trend?

U.S. bankruptcy law section 109 states that an entity may file for Chapter 9 bankruptcy if, and only if, the entity is a municipality and is specifically authorized to be a debtor by state law or by a governmental officer or organization empowered by state law. The entity needs to be insolvent and have a desire to set up a plan to adjust its debt.

Not all U.S. states allow Chapter 9 bankruptcy filings. Georgia, Indiana, Maine, Mississippi, South Dakota, and others do not provide access to Chapter 9. Georgia (GA Code 36-80-5) explicitly denies access to municipal bankruptcy. No county, municipality, or school district is authorized to file a petition for relief from payment of debts as they mature. In addition, no chief executive, mayor, board of commissioners, city council, or other governmental officers can be empowered to cause or authorize the filing of a petition for relief from payment of governmental debts.

States including Michigan, Oregon, and Pennsylvania allow municipalities to file for bankruptcy under certain conditions. In Michigan (statutes 141.1213), the governor may appoint a review team of the state treasurer, the auditor general, other state officials, or other persons to undertake a local financial management review if one or both of the following occur: 1) The governing body of a local government, by resolution, requests assistance (owing to existing financial conditions) to meet the ordinary needs of government; or 2) the governor has been informed by the state treasurer that a serious financial problem might exist within the local government. The review team will assess the local government's fiscal situation and negotiate a consent agreement with the local government concerning plans for financial recovery, if possible.

The states that provide access to Chapter 9 include Minnesota, Texas, and California. Minnesota law (MN statute 471.831) allows municipalities to file a petition for bankruptcy and seek any relief available. Texas (Local Government Code Section 140.001) allows municipalities and taxing districts to proceed under federal bankruptcy laws intended to relieve municipal indebtedness. The officials of the municipality taxing district may take action necessary to proceed with a bankruptcy petition.

More than 600 municipal bankruptcies have occurred in the past 75 years.[15] The most notable are Jefferson County, Alabama (which filed for bankruptcy in 2011 with over $4 billion in debt), as well as Stockton (2012), Vallejo (2008), and Orange County, California (1994).

In 2012, the state and local government utility sector continued to experience improvement, and the sector remains stable overall with more upgrades than downgrades.[16]

Ten Warning Signs to Determine Who's Next

Detroit's situation was due to a convergence of very weak capacity and lack of willingness to repay debt obligations. However, an emerging issue is whether other cities and counties with large debt, pension, and OPEB obligations will consider filing for Chapter 9.

The warning signs listed below could indicate whether a city or county is at risk of defaulting on its general obligation bonds. Detroit showed the vast majority of these signs. If a city or county experiences even half of them, it would be considered "at risk" by S&P Capital IQ, and deeper and more frequent surveillance would be conducted.

Top 10 Warning Signs of a Municipal Bankruptcy

Management Credit Risk Factors

1. Late budget adoption or late receipt of audited financial statements.
2. High degree of senior administrative turnover.
3. Government showing lack of willingness to support the debt.

Economic Credit Risk Factors

4. Unemployment rate over 10%.
5. Income level that is less than 75% of U.S. average.
6. Tax-base market value that is less than $50,000 per capita.

Debt Credit Risk Factors

7. Total governmental funds debt service that represents more than 25% of total governmental funds expenditures.
8. Unaddressed exposures to large unfunded pension or OPEB obligations.

Financial Credit Risk Factors

9. Limited capacity or lack of willingness to cut expenditures.
10. Available fund balance of less than 1% of general funds expenditures (or a general fund deficit).

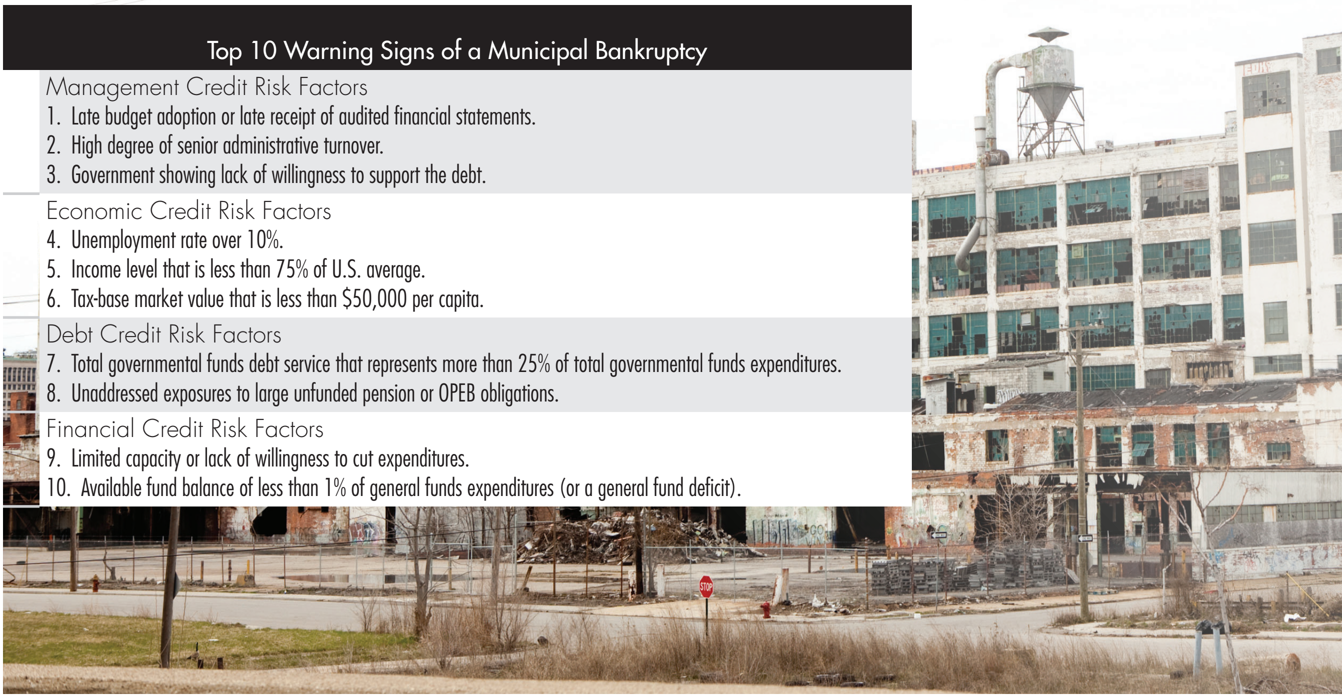
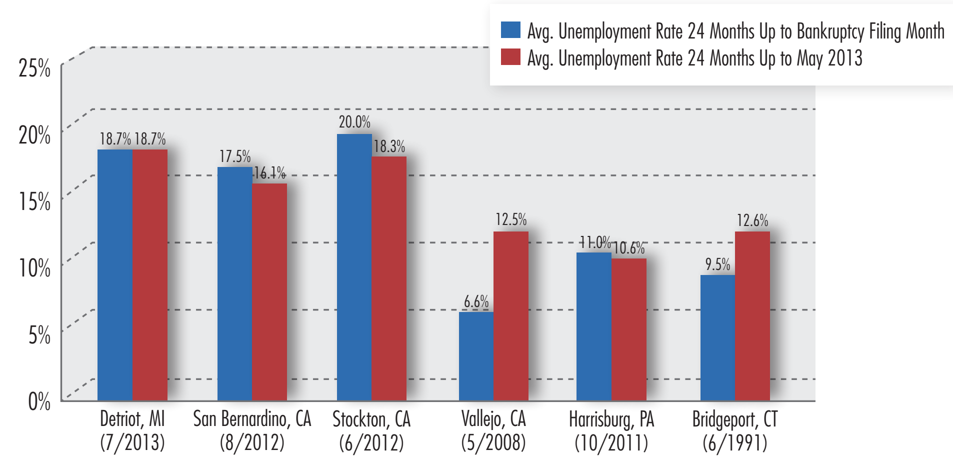


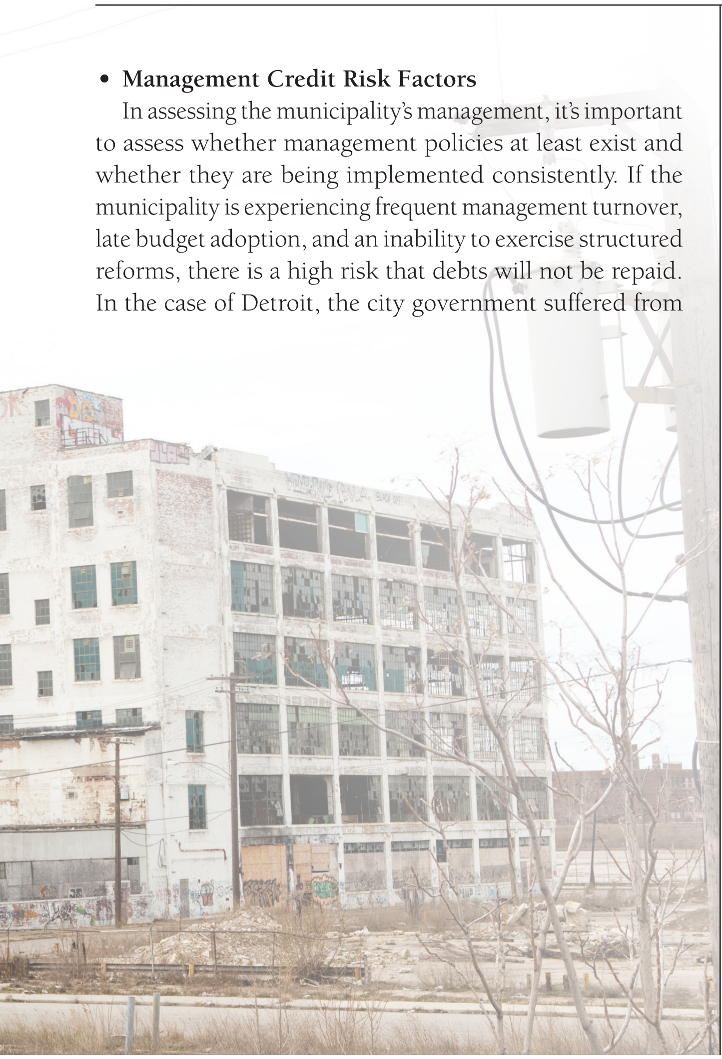
Figure 8

Unemployment Rates for Selected Municipalities That Filed for Bankruptcy



Source: Bureau of Labor Statistics

Note: The date next to each city is the bankruptcy filing date.



- **Management Credit Risk Factors**

In assessing the municipality's management, it's important to assess whether management policies at least exist and whether they are being implemented consistently. If the municipality is experiencing frequent management turnover, late budget adoption, and an inability to exercise structured reforms, there is a high risk that debts will not be repaid. In the case of Detroit, the city government suffered from inability and unwillingness to pay debts. The financial and operating plan, published in May 2013, and the city's financial statements from the past few years indicate that the policies implemented by the management team were unable to improve the city's financial situation.

- **Economic Credit Risk Factors**

Figure 8 shows the average monthly unemployment rates for a group of municipalities in the 24 months before they filed for bankruptcy and for the most recent 24 months to May 2013. Most of these cities (except for Vallejo) had very high unemployment rates (more than 10%) when they filed for bankruptcy.

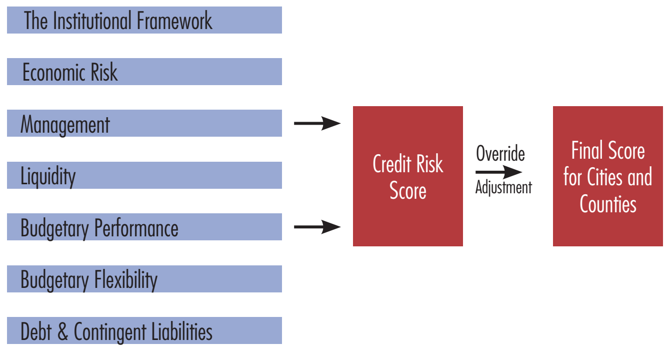
As of May 2013, most of these cities are still experiencing significant job losses. For example, the average 24-month unemployment rate in Stockton was 20.0% in June 2012 (the month in which it filed for bankruptcy) and 18.3% as of May 2013. Harrisburg, Pennsylvania, filed for bankruptcy in October 2011. The average 24-month unemployment rate was 11.0% as of October 2011 and 10.6% as of May 2013. An unemployment rate higher than 10% indicates that the area is under economic stress and experiencing slow growth, which leads to a smaller tax base.

The market value is defined as the estimated taxable market value of all real and personal property within the municipality. When the municipality has an income level less than 75% of the U.S. average and a market value per capita of less than $50,000, its economy is considered weak.

- **Debt Credit Risk Factors**

In general, if the municipality's total governmental funds

Figure 9 Analytical Framework for the City and County PD Scorecard



Source: S&P Capital IQ

debt service is more than 25% of total governmental funds expenditures, the municipality's debt burden is considered weak. In addition to these obvious debt numbers, the off-balance-sheet items, such as pension funds, OPEB obligations, or contingent liability, should be examined closely.

Unaddressed exposures to large unfunded pension or OPEB obligations could represent significant budget pressure for a municipality. Prichard, Alabama (1999 and 2009), Vallejo (2008), Central Falls, Rhode Island (2011), Harrisburg (2011), and Detroit (2013) all filed for bankruptcy because of either their inability to pay their pension fund obligations or their exposure to significant pension liabilities.

- **Financial Credit Risk Factors**

Budgetary performance, budgetary flexibility, and liquidity are all important elements in assessing the credit quality of U.S. cities and counties. They measure the degree to which the government can obtain additional financial flexibility in times of stress. A ratio such as available general funds balance as a percentage of general funds expenditures could be used as the starting point for assessing budgetary flexibility. The total governmental funds net result and the general funds net result should be included also in the assessment of budgetary performance. These ratios reflect the most obvious and measurable form of flexibility.

The importance of qualitative credit risk factors indicates that the scoring approach should include some forward-looking elements.

In addition, analysts should assess whether the government has the willingness and ability to cut expenditures. It's also important to see if the municipality has access to external liquidity, if there is any near-term refinancing risk, and if there has been overly aggressive use of investments.

Models to Assess the Municipal Sector's Credit Risk

Purely quantitative modeling requires a robust loss data set, which is more often available in the retail lending space than in public finance portfolios, where low rates of default often mean that banks lack internal data.

In practical terms, only a few (if any) organizations have the necessary data to truly contemplate the development of a purely quantitative probability of default (PD) rating model for municipalities. An internal rating model designed solely on the basis of limited empirical data might not take into consideration material risk factors such as the legal and political environment in which the local government operates and the municipality's management. Techniques based on advanced regression, rank ordering, or other statistical methods to predict the rated universe may lack sufficient predictive power on the small defaulted universe to justify their wider use.[17]

In addition, some key qualitative factors could have a significant impact on the difference between obligors with strong and weak credit quality. The importance of qualitative risk factors is heightened in the methodology of low-default sectors owing to their nonhomogenous risk profile. To a great extent, the importance of qualitative credit risk factors indicates that the scoring approach should include some forward-looking elements.

For a low-default sector, such as cities and counties, the hybrid scorecard approach is preferable for overcoming the shortcomings of limited data. In fact, hybrid approaches have become the latest modeling trend for municipality portfolios for the following reasons:

- They recognize that the available data does not always capture all known and plausible risk drivers.
- They combine the available empirical data and expert judgment.
- They allow for different assessments for different segments, such as using quantitative benchmarks as an input into the hybrid scorecard with the addition of a qualitative overlay.[18]

Figure 9 sets out S&P Capital IQ's analytical framework for the city and county PD scorecard that combines both quantitative and qualitative techniques. The approach evaluates risk dimensions such as institutional framework, economic risk, management, and budgetary performance. The initial credit score will be based on the assessment of each risk dimension for the city or county. Additional adjustments and overrides will then be applied to come up with the final score, which could be mapped to S&P's long-run default rate.

Conclusion

S&P Capital IQ Risk Solutions has noted that results from different methodologies can diverge significantly as economies or sectors undergo even modest changes. More stability can be expected from a methodology that reacts to changes in a sector's credit drivers in a way consistent with industry best practices. Banks' internal rating methodologies must continually evolve in order for model performance to remain consistent over time.

Analysts are constantly observing trends that drive creditworthiness within the cities and counties sector. This means that the risk factors themselves, and the relative importance of different factors within the scoring process, will evolve over time. These changes should be considered within the analytical framework for the municipality sector. That way we can be confident that the initially well-tested methodology remains valid. An annual review of the evolution of factor importance is also necessary, in our experience.[19] ❖

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Notes

1. Bureau of Labor Statistics.
2. Ibid.
3. See "U.S. State and Local Government Credit Conditions Forecast: The Rebounding Housing Market Supports Slow Growth," July 2013, S&P Capital IQ Global Credit Portal.
4. U.S. Census Bureau.
5. S&P Capital IQ Global Credit Portal.
6. U.S. Census Bureau.
7. Ibid.
8. S&P Capital IQ Global Credit Portal.
9. "Billions in Debt, Detroit Tumbles into Insolvency," *New York Times,* July 18, 2013.
10. "City of Detroit Financial and Operation Plan," May 2013.
11. Ibid.
12. S&P Capital IQ Global Credit Portal.
13. S&P Capital IQ City and County PD Scorecard User Guide.
14. Ibid.
15. "Stockton Bankruptcy Is Hard Hit for City Retirees," AP News, June 27, 2012.
16. "2012 U.S. Public Finance and Rating Transition Data: Default Increase but the Sector Remains Stable Overall," S&P Global Credit Portal, March 2013.
17. S&P Capital IQ Scorecard Technical Documents.
18. Ibid.
19. Ibid.