PUTNAM MANAGED MUNICIPAL INCOME TRUST
Form N-CSR
December 30, 2009

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM N-CSR

CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT INVESTMENT COMPANIES

Investment Company Act file number: (811-05740)

Exact name of registrant as specified in charter: Putnam Managed Municipal Income Trust

Address of principal executive offices: One Post Office Square, Boston, Massachusetts 02109

Name and address of agent for service: Beth S. Mazor, Vice President
One Post Office Square
Boston, Massachusetts 02109

Copy to: John W. Gerstmayr, Esq.
Ropes & Gray LLP
One International Place
Boston, Massachusetts 02110

Registrant's telephone number, including area code: (617) 292-1000

Date of fiscal year end: October 31, 2009

Date of reporting period: November 1, 2008 - October 31, 2009

Item 1. Report to Stockholders:

The following is a copy of the report transmitted to stockholders pursuant to Rule 30e-1 under the Investment Company Act of 1940:

A BALANCED APPROACH

Since 1937, when George Putnam created a diverse mix of stocks and bonds in a single, professionally managed portfolio, Putnam has championed the balanced approach.

A WORLD OF INVESTING

Today, we offer investors a world of equity, fixed-income, multi-asset, and absolute-return portfolios to suit a range of financial goals.

A COMMITMENT TO EXCELLENCE

Our portfolio managers seek superior results over time, backed by original, fundamental research on a global scale. We believe in the value of experienced financial advice, in providing exemplary service, and in putting clients first in all we do.

Putnam Managed Municipal Income Trust

Annual report
10 | 31 | 09

Message from the Trustees

Dear Fellow Shareholder:

The stock market's performance since March has helped restore investor confidence and rebuild portfolios. While this upward trend is welcome, investors should not be surprised if this rate of appreciation levels off in coming months. Time-tested investment principles, such as diversification, asset allocation, and a long-term perspective, apply now more than ever.

In this improved climate, we are pleased to report that many Putnam mutual funds have delivered strong and competitive results over the past year. This performance reflects the intense efforts of an investment team infused with a determination to excel and strengthened by the arrival of several senior portfolio managers, research analysts, and traders.

In another development, Charles E. "Ed" Haldeman, Jr. has stepped down as President of the Putnam Funds and as a member of the Board of Trustees of the Funds to become Chief Executive Officer of the Federal Home Loan Mortgage Corporation (FHLMC), also known as Freddie Mac. Effective July 2009, Robert L. Reynolds, President and Chief Executive Officer of Putnam Investments and a Trustee of the Putnam Funds, replaced Mr. Haldeman as President of the Putnam Funds.

We would like to take this opportunity to welcome new shareholders to the fund and to thank all our investors for your continued confidence in Putnam.

About the fund

Potential for income exempt from federal income tax

Municipal bonds finance important public projects such as schools, roads, and hospitals, and they can help investors keep more of the income they receive from their investment. Putnam Managed Municipal Income Trust offers an additional advantage — the flexibility to invest in municipal bonds issued by any state in the country.

Municipal bonds are typically issued by states and local municipalities to raise funds for building and maintaining public facilities. The income from a municipal bond is generally exempt from federal income tax, and often state and local taxes. The bonds are backed by the issuing city or town or by revenues collected from usage fees, and have varying degrees of credit risk — the risk that the issuer would not be able to repay the bond.

The fund's portfolio managers can select bonds from a variety of state and local governments throughout the United States. The fund also combines bonds of differing credit quality. In addition to investing in high-quality bonds, the managers allocate a portion of the portfolio to lower-rated bonds, which may offer higher income in return for more risk.

When deciding whether to invest in a bond, the portfolio managers consider factors such as credit risk, interest-rate risk, and the risk that the bond will be prepaid. The managers are backed by Putnam's fixed-income organization, where municipal bond analysts are grouped into sector teams and conduct ongoing research. Once a bond has been purchased, the managers continue to monitor developments that affect the bond market, the sector, and the issuer of the bond. Typically, lower-rated bonds are reviewed more often because of their greater potential risk.

The goal of research and active management is to stay a step ahead of the industry and pinpoint opportunities to adjust the fund's holdings for the benefit of investors.

Consider these risks before investing: Capital gains, if any, are taxable for federal and, in most cases, state purposes. For some investors, investment income may be subject to the federal alternative minimum tax. Income from federally exempt funds may be subject to state and local taxes. Please consult with your tax advisor for more information.

Mutual funds that invest in bonds are subject to certain risks, including interest-rate risk, credit risk, and inflation risk. As interest rates rise, the prices of bonds fall. Long-term bonds are more exposed to interest-rate risk than short-term bonds. Lower-rated bonds may offer higher yields in return for more risk. Unlike bonds, bond funds have ongoing fees and expenses. The fund uses leverage, which involves risk and may increase the volatility of the fund's net asset value. The fund's shares trade on a stock exchange at market prices, which may be higher or lower than the fund's net asset value.

How do closed-end funds differ from open-end funds?

More assets at work While open-end funds need to maintain a cash position to meet redemptions, closed-end funds are not subject to redemptions and can keep more of their assets invested in the market.

Traded like stocks Closed-end fund shares are traded on stock exchanges, and their market prices fluctuate in response to supply and demand, among other factors.

Net asset value vs. market price Like an open-end fund's net asset value (NAV) per share, the NAV of a closed-end fund share is equal to the current value of the fund's assets, minus its liabilities, divided by the number of shares outstanding. However, when buying or selling closed-end fund shares, the price you pay or receive is the market price. Market price reflects current market supply and demand and may be higher or lower than the NAV.

Performance and portfolio snapshots

Average annual total return (%) comparison as of 10/31/09

Data is historical. Past performance does not guarantee future results. More recent returns may be less or more than those shown. Investment return and net asset value will fluctuate, and you may have a gain or a loss when you sell your shares. Performance assumes reinvestment of distributions and does not account for taxes. Fund returns in the bar chart are at NAV. See pages 5 and 8–9 for additional performance information, including fund returns at market price. Index and Lipper results should be compared to fund performance at NAV. Lipper calculates performance differently than the closed-end funds it ranks, due to varying methods for determining a fund's monthly reinvestment NAV.

"Unique opportunities exist in BBB-rated bonds offering unusually high yields."

Paul Drury, Portfolio Manager, Putnam Managed Municipal Income Trust

Credit qualities are shown as a percentage of portfolio value as of 10/31/09. A bond rated Baa or higher (MIG3/VMIG3 or higher, for short-term debt) is considered investment grade. The chart reflects Moodys ratings; percentages may include bonds not rated by Moodys but considered by Putnam Management to be of comparable quality. Ratings will vary over time.

4

Interview with your funds portfolio manager

Paul Drury

Paul, the past 12 months have been difficult for fixed-income markets and challenging for national, state, and local economies. How did the municipal bond market and the fund perform in this environment?

For the 12 months ended October 31, 2009, Putnam Managed Municipal Income Trust returned 24.39%, performing in line with the 24.22% average return of its peer group, Lipper High Yield Municipal Debt Funds (closed-end). The fund outperformed its benchmark, the Barclays Capital Municipal Bond Index, which returned 13.60% over the same period. Its important to note that the funds benchmark tracks the performance of a narrower range of municipal bonds than that in which the fund typically invests. Investors should also note that the structural leverage the fund uses through the issue of preferred shares amplifies performance. In what was ultimately a positive market for municipal bonds, the funds use of leverage boosted returns. I should also note that the funds cost of borrowing generally decreased during the period as the interest rate paid on the funds preferred shares declined. As a result, the fund was able to pay more income to common shareholders and the distribution rate was increased.

For municipal bonds, the period turned out to be a tale of two very different environments. In the final months of 2008, extreme turmoil in the credit markets following the collapse of Lehman Brothers dominated the environment. Forced selling by hedge funds and investment banks seeking to raise capital and cover losses put pressure on municipal bonds. All of this added up to an environment where all asset classes, including municipal bonds, underperformed U.S. Treasuries. The economy, meanwhile, remained weak into the early months of 2009, as financial markets, though improved from the fourth quarter of 2008, remained volatile. Consumer confidence languished, housing prices continued their retreat, and unemployment rose to levels not seen in decades.

Against this dire backdrop, the U.S. government, notably the Fed [Federal Reserve Board] and the U.S. Treasury, instituted several wide-ranging measures to restore market stability and investor confidence, joining policymakers around the world in efforts to shore up bank balance sheets and re-establish the flow of credit. As a result of these orchestrated interventions, municipal bonds in the first quarter of 2009 posted their best quarterly performance

Broad market index and fund performance

This comparison shows your funds performance in the context of broad market indexes for the 12 months ended 10/31/09. See the previous page and pages 89 for additional fund performance information. Index descriptions can be found on page 9.

5

since 2004. April marked a continuation of the municipal bond upswing, buoyed by the introduction of Build America Bonds [BABs], a new form of debt unveiled as part of the fiscal stimulus bill. This new taxable debt issuance by traditionally tax-exempt issuers created concerns about the future of the tax-exempt bond supply, which helped add stability to municipal bond prices. The second half of the funds reporting period was generally strong, despite a pullback in October as investors sold positions to lock in profits.

IN THE NEWS

It is an interest rate for the record books, and may be with us for some time. The Fed (Federal Reserve Board), responsible for implementing U.S. monetary policy, sets short-term interest rates through changes to the federal funds rate, the interest rate at which banks loan funds to other banks, usually on an overnight basis. Since December 2008, the federal funds rate has been near an all-time low of 0% as the U.S. government works to restore liquidity to the credit market. The federal funds rate began at 1.13% in 1954 and hit a high of 22.36% in 1981. After its most recent meeting in November, the Fed stated that economic conditions are likely to warrant exceptionally low levels of the federal funds rate for an extended period.

You mentioned the fund increased its dividend. What led to the increase?

The interest rate paid to the funds preferred shareholders periodically changes. During the period, the rate declined, which freed up more income to distribute to common shareholders. Over the past 12 months, the fund increased its distribution rate twice in February and June. All told, the dividend rate increased from $0.0354 to $0.0402 per share during the reporting period.

As you mentioned, the U.S. government has taken extraordinary steps to add stability to the bond markets. What other factors influenced the rebound?

While overall issuance was down, the introduction of BABs had a significant effect on the market. Designed to help cash-strapped state and local governments achieve easier access to capital, BABs are issued as taxable securities, with the issuer receiving a 35% subsidy of the interest direct from the U.S. Treasury. The combination of high yields on municipal bonds and concern about a potential decline in sources of tax-free income helped strengthen municipal bond prices in the second half of the funds fiscal year.

What changes did you make to the funds positioning during the period?

The changes we made generally revolved around the funds credit quality. During the fourth quarter of 2008 and the first few months of 2009, investors almost exclusively sought the relative safe haven of higher-quality and shorter-maturity securities. At the time, the portfolios relatively high overall credit quality was beneficial, as investments with any perceived credit risk [i.e., default] were punished. As the market volatility continued, however, we opportunistically added lower-rated securities to the fund, particularly in the BBB-rated segment, which was trading at historically cheap levels and offering yields significantly higher than average. While the fund also selectively added a few holdings rated BB or B, which also performed well, it was the BBB-rated segment that delivered by far the biggest gains over the fiscal year, with holdings in that segment driving the bulk of the funds returns.

One of the positions we established in the late 2008early 2009 time frame was in ***California General Obligation*** bonds. In the spring of 2009, California was experiencing significant budget problems and the states general obligation bonds backed by tax revenues, rather than a specific project or entity were offering yields significantly above their long-term averages. We believed these bonds presented an attractive buying opportunity and in July, after $15 billion of cuts, California finally passed its budget, and the states general obligation bonds appreciated substantially.

Which other holdings helped fund performance?

Two tobacco bonds in the portfolio posted strong returns. To give some background, state tobacco bonds are funded with revenue stemming from a legal agreement that exempted tobacco companies from health-related lawsuits in exchange for annual payments, in perpetuity, to the states to cover tobacco-related health-care costs. Often these bonds offer higher yields than other issues of comparable quality and, in general, tobacco bonds are some of the largest and most liquid BBB-rated municipal bonds on the market. When investors sought out high-quality securities earlier in the year, tobacco bonds were some of the easiest positions to exit, and sold off dramatically. As the market recovered, the fund□s positions in ***Buckeye Tobacco*** bonds and ***Badger Tobacco*** bonds rallied sharply, and both were among the top contributors to returns.

Which positions detracted from returns during the period?

Insured issues were some of the fund□s biggest detractors, as monoline insurers □ which guarantee the timely repayment of bond principal and interest when an issuer defaults □ were downgraded during the period. Historically, monoline insurance has provided municipal issuers with higher credit ratings and lower interest rates. However, concerns about monoline insurers□ exposure to mortgage bonds resulted in the insurers suffering downgrades to their credit quality, and insurance now has much less value than in the past. In fact, there is no longer any bond insurer rated AAA by all three major ratings agencies □ Moody□s Investors Service, Fitch Ratings, and Standard & Poor□s ***Puerto Rico Commonwealth*** bonds, which are insured by Financial Guaranty Insurance Company, were one such example, and declined in value after FGIC□s credit was downgraded during the period.

Illinois Finance Monarch Landing bonds also hurt returns. Land bonds are a form of revenue bonds, secured by the income generated from specific development projects. During the beginning of the period, given investors□ concerns about the bond markets in general and the stability of real estate prices in particular, this segment of the market sold off precipitously. Overall, the fund has relatively little exposure to these types of securities.

What is your outlook for the municipal bond market?

Our outlook has not changed much since the beginning of the year. The Fed and the U.S. Treasury have taken unprecedented steps to inject liquidity into the credit markets, boost the economy, and help increase the flow of credit. However, it is important to understand that the effects of many of these steps will take time, and markets are likely, in our view, to remain challenging in the near term, particularly with the lingering concerns over state budgets, the future of bond insurers, and the potential for regulatory changes.

Despite these challenges, as I have mentioned in prior fund commentaries, we see two key benefits that municipal bond funds offer. First, given the likelihood that the Bush administration tax cuts will be allowed to expire in 2010, municipal bonds□ tax-free income should become even more attractive compared with taxable fixed income. Second, the overall credit quality of the municipal bond asset class remains high and default rates relative to corporate bonds remain extremely low. Many areas of the municipal bond market appear to have been oversold by risk-averse investors, and this has created unique opportunities for the fund to add high-quality bonds offering unusually high yields.

Thank you, Paul, for your time and insights today.

The views expressed in this report are exclusively those of Putnam Management. They are not meant as investment advice.

Please note that the holdings discussed in this report may not have been held by the fund for the entire period. Portfolio composition is subject to review in accordance with the fund□s investment strategy and may vary in the future. Current and future portfolio holdings are subject to risk.

Portfolio Manager **Paul Drury** is a Tax Exempt Specialist at Putnam. He has a B.A. from Suffolk University. A CFA charterholder, Paul has been in the investment industry since he joined Putnam in 1989.

In addition to Paul, your fund□s portfolio managers are Brad Libby, Susan McCormack, and Thalia Meehan.

This chart shows how the fund□s top weightings have changed over the past six months. Weightings are shown as a percentage of net assets. Holdings will vary over time. Sector concentrations listed after the portfolio schedule in the Financial Statements section of this shareholder report are exclusive of insured or prerefunded status and may differ from the summary information above.

7

Your fund□s performance

This section shows your fund□s performance, price, and distribution information for periods ended October 31, 2009, the end of its most recent fiscal year. In accordance with regulatory requirements for mutual funds, we also include performance as of the most recent calendar quarter-end. Performance should always be considered in light of a fund□s investment strategy. Data represents past performance. Past performance does not guarantee future results. More recent returns may be less or more than those shown. Investment return, net asset value, and market price will fluctuate, and you may have a gain or a loss when you sell your shares.

Fund performance Total return for periods ended 10/31/09

	NAV	Market price	Barclays Capital Municipal Bond Index	Lipper High Yield Municipal Debt Funds (closed-end) category average*
Annual average				
Life of fund (since 2/24/89)	6.17%	5.37%	6.53%	5.15%
10 years	60.21	31.60	73.43	58.69
Annual average	4.83	2.78	5.66	4.65
5 years	19.13	22.86	22.57	17.91
Annual average	3.56	4.20	4.15	3.30
3 years	3.66	5.20	13.04	-1.33
Annual average	1.21	1.70	4.17	-0.52
1 year	24.39	24.96	13.60	24.22

Performance assumes reinvestment of distributions and does not account for taxes.

Index and Lipper results should be compared to fund performance at net asset value. Lipper calculates performance differently than the closed-end funds it ranks, due to varying methods for determining a fund□s monthly reinvestment NAV.

* Over the 1-year, 3-year, 5-year, 10-year, and life-of-fund periods ended 10/31/09, there were 15, 14, 14, 11, and 6 funds, respectively, in this Lipper category.

Fund price and distribution information For the 12-month period ended 10/31/09

Distributions			
Number		12	
Income [1]		$0.4592	
Capital gains [2]		—	
Total		$0.4592	
Distributions — preferred shares*	**Series A**	**Series B**	**Series C**
Income [1]	$748.83	$239.86	$309.70
Capital gains [2]	—	—	—
Total	$748.83	$239.86	$309.70
Share value		**NAV**	**Market price**
10/31/08		$6.23	$5.70
10/31/09		7.17	6.59
Current yield (end of period)		**NAV**	**Market price**
Current dividend rate [3]		6.73%	7.32%
Taxable equivalent [4]		10.35	11.26

The classification of distributions, if any, is an estimate. Final distribution information will appear on your year-end tax forms.

* For further information on the preferred shares outstanding during the period, please refer to the financial statements— Note 4: Preferred shares on page 33.

[1] For some investors, investment income may be subject to the federal alternative minimum tax. Income from federally exempt funds may be subject to state and local taxes.

[2] Capital gains, if any, are taxable for federal and, in most cases, state purposes.

3 Most recent distribution, excluding capital gains, annualized and divided by NAV or market price at end of period.

4 Assumes maximum 35% federal tax rate for 2009. Results for investors subject to lower tax rates would not be as advantageous.

8

Fund performance as of most recent calendar quarter Total return for periods ended 9/30/09

	NAV	Market price
Annual average		
Life of fund (since 2/24/89)	6.29%	5.55%
10 years	59.57	33.09
Annual average	4.78	2.90
5 years	22.51	27.47
Annual average	4.14	4.97
3 years	6.33	10.32
Annual average	2.07	3.33
1 year	14.47	12.87

Terms and definitions

Important terms

Total return shows how the value of the fund□s shares changed over time, assuming you held the shares through the entire period and reinvested all distributions in the fund.

Net asset value (NAV) is the value of all your fund□s assets, minus any liabilities and the net assets allocated to any outstanding preferred shares, divided by the number of outstanding common shares.

Market price is the current trading price of one share of the fund. Market prices are set by transactions between buyers and sellers on exchanges such as the New York Stock Exchange.

Current yield is the annual rate of return earned from dividends or interest of an investment. Current yield is expressed as a percentage of the price of a security, fund share, or principal investment.

Comparative indexes

Barclays Capital Aggregate Bond Index is an unmanaged index of U.S. investment-grade fixed-income securities.

Barclays Capital Municipal Bond Index is an unmanaged index of long-term fixed-rate investment-grade tax-exempt bonds.

BofA Merrill Lynch U.S. 3-Month Treasury Bill Index is an unmanaged index that seeks to measure the performance of U.S. Treasury bills available in the marketplace.

S&P 500 Index is an unmanaged index of common stock performance.

Indexes assume reinvestment of all distributions and do not account for fees. Securities and performance of a fund and an index will differ. You cannot invest directly in an index.

Lipper is a third-party industry-ranking entity that ranks mutual funds. Its rankings do not reflect sales charges. Lipper rankings are based on total return at net asset value relative to other funds that have similar current investment styles or objectives as determined by Lipper. Lipper may change a fund's category assignment at its discretion. Lipper category averages reflect performance trends for funds within a category.

Trustee approval of management contract

General conclusions

The Board of Trustees of the Putnam funds oversees the management of each fund and, as required by law, determines annually whether to approve the continuance of your fund's management contract with Putnam Investment Management ("Putnam Management").

In this regard, the Board of Trustees, with the assistance of its Contract Committee consisting solely of Trustees who are not "interested persons" (as such term is defined in the Investment Company Act of 1940, as amended) of the Putnam funds (the "Independent Trustees"), requests and evaluates all information it deems reasonably necessary under the circumstances. Over the course of several months ending in June 2009, the Contract Committee met several times to consider the information provided by Putnam Management and other information developed with the assistance of the Board's independent counsel and independent staff. The Contract Committee reviewed and discussed key aspects of this information with all of the Independent Trustees. At the Trustees' June 12, 2009 meeting, the Contract Committee recommended, and the Independent Trustees approved, the continuance of your fund's management contract, effective July 1, 2009. In addition, at the Trustees' September 11, 2009 meeting, the Contract Committee recommended, and the Independent Trustees approved, a sub-management contract with respect to your fund between Putnam Management and its affiliate, Putnam Investments Limited ("PIL"), effective September 14, 2009. (Because PIL is an affiliate of Putnam Management and Putnam Management remains fully responsible for all services provided by PIL, the Trustees have not evaluated PIL as a separate entity, and all subsequent references to Putnam Management below should be deemed to include reference to PIL as necessary or appropriate in the context.)

The Independent Trustees' approval was based on the following conclusions:

- That the fee schedule in effect for your fund represented reasonable compensation in light of the nature and quality of the services being provided to the fund, the fees paid by competitive funds and the costs incurred by Putnam Management in providing such services, and

- That such fee schedule represented an appropriate sharing between fund shareholders and Putnam Management of such economies of scale as may exist in the management of the fund at current asset levels.

These conclusions were based on a comprehensive consideration of all information provided to the Trustees and were not the result of any single factor. Some of the factors that figured particularly in the Trustees’ deliberations and how the Trustees considered these factors are described below, although individual Trustees may have evaluated the information presented differently, giving different weights to various factors. It is also important to recognize that the fee arrangements for your fund and the other Putnam funds are the result of many years of review and discussion between the Independent Trustees and Putnam Management, that certain aspects of the arrangements may receive greater scrutiny in some years than others, and that the Trustees’ conclusions may be based, in part, on their consideration of these same arrangements in prior years.

Management fee schedules and categories; total expenses

The Trustees reviewed the management fee schedules in effect for all Putnam funds, including fee levels and breakpoints, and the assignment of funds to particular fee categories. The general fee structure has been carefully developed over the years and re-examined on many occasions and adjusted where appropriate. In this regard, the Trustees noted that shareholders of all funds voted by overwhelming majorities in 2007 to approve new management contracts containing identical fee schedules.

In reviewing fees and expenses, the Trustees generally focused their attention on material changes in circumstances — for example, changes in a fund’s size or investment style, changes in Putnam Management’s operating costs, or changes in competitive practices in the mutual fund industry — that suggest that consideration of fee changes might be warranted. The Trustees concluded that the circumstances did not warrant changes to the management fee structure of your fund. The Trustees focused on two areas of particular interest, as discussed further below:

• **Competitiveness.** The Trustees reviewed comparative fee and expense information for competitive funds, which indicated that, in a custom peer group of competitive funds selected by Lipper Inc., your fund ranked in the 33rd percentile in management fees and in the 50th percentile in total expenses as of December 31, 2008 (the first percentile being the least expensive funds and the 100th percentile being the most expensive funds).

The Trustees noted that expense ratios for a number of Putnam funds, which show the percentage of fund assets used to pay for management and administrative services, distribution (12b-1) fees (as applicable) and other expenses, had been increasing recently as a result of declining net assets and the natural operation of fee breakpoints. The Trustees expressed their intention to monitor the funds’ percentile rankings in management fees and in total expenses to ensure that fees and expenses of the funds continue to meet evolving competitive standards.

• **Economies of scale.** Your fund currently has the benefit of breakpoints in its management fee that provide shareholders with significant economies of scale, which means that the effective management fee rate of the fund (as a percentage of fund assets) declines as the fund grows in size and crosses specified asset thresholds. Conversely, as the fund shrinks in size — as has been the case for many Putnam funds in recent years — these breakpoints result in increasing fee levels. In recent years, the

Trustees have examined the operation of the existing breakpoint structure during periods of both growth and decline in asset levels. The Trustees concluded that the fee schedule in effect for your fund represented an appropriate sharing of economies of scale at that time.

In connection with their review of the management fees and total expenses of the Putnam funds, the Trustees also reviewed the costs of the services provided and profits realized by Putnam Management and its affiliates from their contractual relationships with the funds. This information included trends in revenues, expenses and profitability of Putnam Management and its affiliates relating to the investment management and distribution services provided to the funds. In this regard, the Trustees also reviewed an analysis of Putnam Management’s revenues, expenses and profitability with respect to the funds’ management contracts, allocated on a fund-by-fund basis.

Investment performance

The quality of the investment process provided by Putnam Management represented a major factor in the Trustees evaluation of the quality of services provided by Putnam Management under your funds management contract. The Trustees were assisted in their review of the Putnam funds investment process and performance by the work of the Investment Oversight Coordinating Committee of the Trustees and the Investment Oversight Committees of the Trustees, which had met on a regular monthly basis with the funds portfolio teams throughout the year. The Trustees concluded that Putnam Management generally provides a high-quality investment process as measured by the experience and skills of the individuals assigned to the management of fund portfolios, the resources made available to such personnel, and in general the ability of Putnam Management to attract and retain high-quality personnel but also recognized that this does not guarantee favorable investment results for every fund in every time period. The Trustees considered the investment performance of each fund over multiple time periods and considered information comparing each funds performance with various benchmarks and with the performance of competitive funds.

The Trustees noted the disappointing investment performance of many of the funds for periods ended March 31, 2009. They discussed with senior management of Putnam Management the factors contributing to such underperformance and the actions being taken to improve performance. The Trustees recognized that, in recent years, Putnam Management has taken steps to strengthen its investment personnel and processes to address areas of underperformance, including Putnam Managements continuing efforts to strengthen the equity research function, recent changes in portfolio managers including increased accountability of individual managers rather than teams, recent changes in Putnam Managements approach to incentive compensation, including emphasis on top quartile performance over a rolling three-year period, and the recent arrival of a new chief investment officer. The Trustees also recognized the substantial improvement in performance of many funds since the implementation of those changes. The Trustees indicated their intention to continue to monitor performance trends to assess the effectiveness of these efforts and to evaluate whether additional changes to address areas of underperformance are warranted.

In the case of your fund, the Trustees considered that your funds common share cumulative total return performance at net asset value was in the following percentiles of its Lipper Inc. peer group (Lipper High Yield Municipal Debt Funds (closed-end)) (compared using tax-adjusted performance to recognize the different federal income tax treatment for capital gains distributions and exempt-interest distributions) for the one-year, three-year and five-year periods ended March 31, 2009 (the first percentile being the best-performing funds and the 100th percentile being the worst-performing funds):

One-year period	31st
Three-year period	40th
Five-year period	66th

Over the one-year, three-year and five-year periods ended March 31, 2009, there were 15, 14 and 14 funds, respectively, in your funds Lipper peer group. Past performance is no guarantee of future results.

As a general matter, the Trustees believe that cooperative efforts between the Trustees and Putnam Management represent the most effective way to address investment performance problems. The Trustees noted that investors in the Putnam funds have, in effect, placed their trust in the Putnam organization, under the oversight of the funds Trustees, to make appropriate decisions regarding the management of the funds. Based on the responsiveness of Putnam Management in the recent past to Trustee concerns about investment performance, the Trustees concluded that it is preferable to seek change within Putnam Management to address performance shortcomings. In the Trustees view, the alternative of engaging a new investment adviser for an underperforming fund would entail significant disruptions and would not provide any greater assurance of improved investment performance.

Brokerage and soft-dollar allocations; other benefits

The Trustees considered various potential benefits that Putnam Management may receive in connection with the services it provides under the management contract with your fund. These include benefits related to brokerage and soft-dollar allocations, whereby a portion of the commissions paid by a fund for brokerage may be used to acquire research services that may be useful to Putnam Management in managing the assets of the fund and of other clients. The Trustees considered a change made, at Putnam Managements request, to the Putnam funds brokerage allocation policy commencing in 2009, which increased the permitted soft dollar allocation to third-party services over what had been authorized in previous years. The Trustees noted that a portion of available soft dollars continue to be allocated to the payment of fund expenses, although the amount allocated for this purpose has declined in recent years. The Trustees indicated

their continued intent to monitor regulatory developments in this area with the assistance of their Brokerage Committee and also indicated their continued intent to monitor the potential benefits associated with the allocation of fund brokerage and trends in industry practice to ensure that the principle of seeking best price and execution remains paramount in the portfolio trading process.

The Trustees annual review of your funds management contract also included the review of the investor servicing agreement with Putnam Fiduciary Trust Company, which agreement provides benefits to an affiliate of Putnam Management.

Comparison of retail and institutional fee schedules

The information examined by the Trustees as part of their annual contract review has included for many years information regarding fees charged by Putnam Management and its affiliates to institutional clients such as defined benefit pension plans, college endowments, etc. This information included comparisons of such fees with fees charged to the funds, as well as a detailed assessment of the differences in the services provided to these two types of clients. The Trustees observed, in this regard, that the differences in fee rates between institutional clients and mutual funds are by no means uniform when examined by individual asset sectors, suggesting that differences in the pricing of investment management services to these types of clients reflect to a substantial degree historical competitive forces operating in separate market places. The Trustees considered the fact that fee rates across different asset classes are typically higher on average for mutual funds than for institutional clients, as well as the differences between the services that Putnam Management provides to the Putnam funds and those that it provides to institutional clients of the firm, but did not rely on such comparisons to any significant extent in concluding that the management fees paid by your fund are reasonable.

Other information for shareholders

Important notice regarding share repurchase program

In September 2009, the Trustees of your fund approved the renewal of a share repurchase program that had been in effect since 2005. This renewal will allow your fund to repurchase, in the 12 months beginning October 8, 2009, up to 10% of the funds common shares outstanding as of October 7, 2009.

Putnams policy on confidentiality

In order to conduct business with our shareholders, we must obtain certain personal information such as account holders addresses, telephone numbers, Social Security numbers, and the names of their financial representatives. We use this information to assign an account number and to help us maintain accurate records of transactions and account balances. It is our policy to protect the confidentiality of your information, whether or not you currently own shares of our funds, and, in particular, not to sell information about you or your accounts to outside marketing firms. We have safeguards in place designed to prevent unauthorized access to our computer systems and procedures to protect personal information from unauthorized use. Under certain circumstances, we share this information with outside vendors who provide services to us, such as mailing and proxy solicitation. In those cases, the service providers enter into confidentiality agreements with us, and we provide only the information necessary to process transactions and perform other services related to your account. We may also share this information with our Putnam affiliates to service your account or provide you with information about other Putnam products or services. It is also our policy to share account information with your financial representative, if youve listed one on your Putnam account. If you would like clarification about our confidentiality policies or have any questions or concerns, please dont hesitate to contact us at 1-800-225-1581, Monday through Friday, 8:00 a.m. to 8:00 p.m. Eastern Time.

Proxy voting

Putnam is committed to managing our mutual funds in the best interests of our shareholders. The Putnam funds proxy voting guidelines and procedures, as well as information regarding how your fund voted proxies relating to portfolio securities during the 12-month period ended June 30, 2009, are available in the Individual Investors section at putnam.com, and on the SECs Web site, www.sec.gov. If you have questions about finding forms on the SECs Web site, you may call the SEC at 1-800-SEC-0330. You may also obtain the Putnam funds proxy voting guidelines and procedures at no charge by calling Putnams Shareholder Services at 1-800-225-1581.

Fund portfolio holdings

The fund will file a complete schedule of its portfolio holdings with the SEC for the first and third quarters of each fiscal year on Form N-Q. Shareholders may obtain the funds Forms N-Q on the SECs Web site at www.sec.gov. In addition, the funds Forms N-Q may be reviewed and copied at the SECs Public Reference Room in Washington, D.C. You may call the SEC at 1-800-SEC-0330 for information about the SECs Web site or the operation of the Public Reference Room.

Trustee and employee fund ownership

Putnam employees and members of the Board of Trustees place their faith, confidence, and, most importantly, investment dollars in Putnam mutual funds. As of October 31, 2009, Putnam employees had approximately $303,000,000 and the Trustees had approximately $40,000,000 invested in Putnam mutual funds. These amounts include investments by the Trustees and employees immediate family members as well as investments through retirement and deferred compensation plans.

Financial statements

These sections of the report, as well as the accompanying Notes, preceded by the Report of Independent Registered Public Accounting Firm, constitute the funds financial statements.

The funds portfolio lists all the funds investments and their values as of the last day of the reporting period. Holdings are organized by asset type and industry sector, country, or state to show areas of concentration and diversification.

Statement of assets and liabilities shows how the funds net assets and share price are determined. All investment and noninvestment assets are added together. Any unpaid expenses and other liabilities are subtracted from this total. The result is divided by the number of shares to determine the net asset value per share. (For funds with preferred shares, the amount subtracted from total assets includes the liquidation preference of preferred shares.)

Statement of operations shows the fund's net investment gain or loss. This is done by first adding up all the fund's earnings —from dividends and interest income — and subtracting its operating expenses to determine net investment income (or loss). Then, any net gain or loss the fund realized on the sales of its holdings — as well as any unrealized gains or losses over the period — is added to or subtracted from the net investment result to determine the fund's net gain or loss for the fiscal year.

Statement of changes in net assets shows how the fund's net assets were affected by the fund's net investment gain or loss, by distributions to shareholders, and by changes in the number of the fund's shares. It lists distributions and their sources (net investment income or realized capital gains) over the current reporting period and the most recent fiscal year-end. The distributions listed here may not match the sources listed in the Statement of operations because the distributions are determined on a tax basis and may be paid in a different period from the one in which they were earned.

Financial highlights provide an overview of the fund's investment results, per-share distributions, expense ratios, net investment income ratios, and portfolio turnover in one summary table, reflecting the five most recent reporting periods. In a semiannual report, the highlight table also includes the current reporting period.

Report of Independent Registered Public Accounting Firm

The Board of Trustees and Shareholders
Putnam Managed Municipal Income Trust:

We have audited the accompanying statement of assets and liabilities of Putnam Managed Municipal Income Trust (the "fund"), including the fund's portfolio, as of October 31, 2009, and the related statement of operations for the year then ended, the statements of changes in net assets for each of the two years in the period then ended and the financial highlights for each of the five years in the period then ended. These financial statements and financial highlights are the responsibility of the fund's management. Our responsibility is to express an opinion on these financial statements and financial highlights based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform our audit to obtain reasonable assurance about whether the financial statements and financial highlights are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. Our procedures included confirmation of securities owned as of October 31, 2009 by correspondence with the custodian and brokers or by other appropriate auditing procedures. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements and financial highlights referred to above present fairly, in all material respects, the financial position of Putnam Managed Municipal Income Trust as of October 31, 2009, the results of its operations for the year then ended, the changes in its net assets for each of the two years in the period then ended, and the financial highlights for each of the five years in the period then ended, in conformity with U.S. generally accepted accounting principles.

Boston, Massachusetts
December 10, 2009

The funds portfolio 10/31/09

Key to holdings abbreviations

ABAG Association Of Bay Area Governments
AMBAC AMBAC Indemnity Corporation
COP Certificates of Participation
FGIC Financial Guaranty Insurance Company
FHA Insd. Federal Housing Administration Insured
FNMA Coll. Federal National Mortgage Association Collateralized
FRB Floating Rate Bonds
FRN Floating Rate Notes
FSA Financial Security Assurance
G.O. Bonds General Obligation Bonds
GNMA Coll. Government National Mortgage Association Collateralized
NATL National Public Finance Guarantee Corp.
U.S. Govt. Coll. U.S. Government Collateralized
VRDN Variable Rate Demand Notes

MUNICIPAL BONDS AND NOTES (129.4%)*	**Rating****	**Principal amount**
Alabama (0.9%)		
Butler, Indl. Dev. Board Solid Waste Disp. Rev. Bonds (GA. Pacific Corp.), 5 3/4s, 9/1/28	BB	$1,500,000
Courtland, Indl. Dev. Board Env. Impt. Rev. Bonds (Intl. Paper Co.), Ser. A, 5s, 11/1/13	BBB	1,500,000
Sylacauga, Hlth. Care Auth. Rev. Bonds (Coosa Valley Med. Ctr.), Ser. A		
6s, 8/1/35	B/P	250,000
6s, 8/1/25	B/P	650,000
Arizona (5.3%)		
Apache Cnty., Indl. Dev. Auth. Poll. Control Rev. Bonds (Tucson Elec. Pwr. Co.)		
Ser. B, 5 7/8s, 3/1/33	Baa3	1,000,000
Ser. A, 5.85s, 3/1/28	Baa3	250,000
AZ Hlth. Fac. Auth. Hosp. Syst. Rev. Bonds (John C. Lincoln Hlth. Network),		
6 3/8s, 12/1/37 (Prerefunded)	BBB	1,500,000
Casa Grande, Indl. Dev. Auth. Rev. Bonds (Casa Grande Regl. Med. Ctr.), Ser. A		
7 5/8s, 12/1/29	B+/P	1,800,000
7 1/4s, 12/1/19	B+/P	1,000,000
Cochise Cnty., Indl. Dev. Auth. Rev. Bonds (Sierra Vista Regl. Hlth. Ctr.), Ser. A, 6.2s, 12/1/21	BBB/P	455,000

Coconino Cnty., Poll. Control Rev. Bonds		
(Tuscon/Navajo Elec. Pwr.), Ser. A, 7 1/8s, 10/1/32	Baa3	3,750,000
(Tucson Elec. Pwr. Co. Navajo), Ser. A, 5 1/8s, 10/1/32	Baa3	2,000,000
Maricopa Cnty., Poll. Control Rev. Bonds		
(El Paso Elec. Co.), Ser. A, 7 1/4s, 2/1/40	Baa2	2,200,000
(Public Service Co. of NM), Ser. A, 6.3s, 12/1/26	Baa3	535,000
Navajo Cnty., Poll. Control Corp. Mandatory Put Bonds, Ser. E, 5 3/4s, 6/1/16	Baa2	1,950,000
Pima Cnty., Indl. Dev. Auth. Rev. Bonds		
(Tucson Elec. Pwr.), Ser. A, 6 3/8s, 9/1/29	Baa3	500,000
(Horizon Cmnty. Learning Ctr.), 5.05s, 6/1/25	BBB	1,140,000
Salt Verde, Fin. Corp. Gas Rev. Bonds, 5 1/2s, 12/1/29	A	2,000,000
Scottsdale, Indl. Dev. Auth. Hosp. Rev. Bonds (Scottsdale Hlth. Care), Class A, 5 1/4s, 9/1/30	A3	1,000,000
Tempe, Indl. Dev. Auth. Sr. Living Rev. Bonds (Friendship Village), Ser. A, 5 3/8s, 12/1/13	BB/P	393,000
		2
Arkansas (0.4%)		
Arkadelphia, Pub. Ed. Fac. Board Rev. Bonds (Ouachita Baptist U.), 6s, 3/1/33	BB/P	840,000
Little Rock G.O. Bonds (Cap. Impt.), FSA, 3.95s, 4/1/19	AAA	45,000
Springdale, Sales & Use Tax Rev. Bonds, FSA, 4.05s, 7/1/26	AAA	1,000,000
California (11.1%)		
ABAG Fin. Auth. COP (American Baptist Homes), Ser. A, 6.2s, 10/1/27	BBB	345,000
CA Hlth. Fac. Fin. Auth. Rev. Bonds, AMBAC, 5.293s, 7/1/17	A2	3,400,000
CA Muni. Fin. Auth. COP (Cmnty. Hosp. Central CA),		
5 1/2s, 2/1/39	Baa2	2,960,000
5 1/4s, 2/1/37	Baa2	1,105,000
CA Poll. Control Fin. Auth. Rev. Bonds (Pacific Gas & Electric Corp.), Class D, FGIC, 4 3/4s, 12/1/23	A3	2,500,000

CA Poll. Control Fin. Auth. Solid Waste Disp. FRB (Waste Management, Inc.), Ser. C, 5 1/8s, 11/1/23	A–2	2,150,000
CA Poll. Control Fin. Auth. Solid Waste Disp. Rev. Bonds (Waste Management, Inc.),		
Ser. A-2, 5.4s, 4/1/25	BBB	1,760,000
CA State G.O. Bonds		
6 1/2s, 4/1/33	A	5,000,000
5s, 10/1/29	A	3,000,000
CA State Pub. Wks. Board Rev. Bonds, Ser. G-1, 5 3/4s, 10/1/30	A–	2,725,000
CA Statewide Cmnty. Dev. Auth. COP (The Internext Group), 5 3/8s, 4/1/30	BBB	3,950,000

MUNICIPAL BONDS AND NOTES (129.4%)* *cont.*	**Rating****	**Principal amount**
California *cont.*		
CA Statewide Cmnty., Dev. Auth. Rev. Bonds (Thomas Jefferson School of Law),		
Ser. A, 7 1/4s, 10/1/38	BB+	$560,000
Cathedral City, Impt. Board Act of 1915 Special Assmt. Bonds (Cove Impt. Dist.), Ser. 04-02		
5.05s, 9/2/35	BBB–/P	1,015,000
5s, 9/2/30	BBB–/P	245,000
Chula Vista, Cmnty. Fac. Dist. Special Tax Rev. Bonds		
(No. 06-1 Eastlake Woods Area), 6.1s, 9/1/21	BBB/P	1,000,000
(No. 07-1 Otay Ranch Village Eleven), 5.8s, 9/1/28	BB+/P	290,000
Chula Vista, Indl. Dev. Rev. Bonds (San Diego Gas), Ser. B, 5s, 12/1/27	Aa3	1,490,000
Foothill/Eastern Corridor Agcy. Rev. Bonds		
(Toll Road), 5.85s, 1/15/23	Baa3	500,000
(CA Toll Roads), 5 3/4s, 1/15/40	Baa3	2,745,000
Golden State Tobacco Securitization Corp. Rev. Bonds, Ser. A-1, 5s, 6/1/33	BBB	750,000
M-S-R Energy Auth. Rev. Bonds, Ser. A, 6 1/2s, 11/1/39	A	750,000

Orange Cnty., Cmnty. Fac. Dist. Special Tax Rev. Bonds (Ladera Ranch No. 02-1), Ser. A, 5.55s, 8/15/33	BBB/P	900,000
Poway, Unified School Dist. Cmnty. Facs. Special Tax Bonds (Dist. No. 14- Area A), 5 1/8s, 9/1/26	BB-/P	850,000
Sacramento, Special Tax Rev. Bonds (North Natomas Cmnty. Fac.), Ser. 4-C, 6s, 9/1/33	BBB-/P	1,245,000
San Francisco, City & Cnty. Redev. Fin. Auth. Tax Alloc. Bonds (Mission Bay South), Ser. D, 6 5/8s, 8/1/39	BBB	250,000
Santaluz, Cmnty. Facs. Dist. No. 2 Special Tax Rev. Bonds (Impt. Area No. 1), Ser. B, 6 3/8s, 9/1/30	BBB/P	3,010,000
Sunnyvale, Special Tax Rev. Bonds (Cmnty. Fac. Dist. No. 1), 7 3/4s, 8/1/32	B+/P	835,000
Thousand Oaks, Cmnty. Fac. Dist. Special Tax Rev. Bonds (Marketplace 94-1), zero %, 9/1/14	B/P	2,240,000
Colorado (3.0%)		
CO Hlth. Fac. Auth. Rev. Bonds		
(Christian Living Cmntys.), Ser. A, 8 1/4s, 1/1/24	BB-/P	375,000
(Evangelical Lutheran), Ser. A, 6 1/8s, 6/1/38	A3	2,045,000
(Christian Living Cmntys.), Ser. A, 5 3/4s, 1/1/26	BB-/P	425,000
(Valley View Assn.), 5 1/4s, 5/15/42	BBB	3,495,000
CO Pub. Hwy. Auth. Rev. Bonds (E-470 Pub. Hwy.)		