

PUTNAM MASTER INTERMEDIATE INCOME TRUST
Form N-CSR
November 26, 2014

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: (811-05498)

Exact name of registrant as specified in charter: Putnam Master Intermediate Income Trust

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

Name and address of agent for service: Robert T Burns, Vice President
One Post Office Square
Boston, Massachusetts 02109

Copy to: Bryan Chegwidden, Esq.
Ropes & Gray LLP
1211 Avenue of the Americas
New York, New York 10036

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

Date of fiscal year end: September 30, 2014

Date of reporting period: October 1, 2013 – September 30, 2014

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:

Putnam
Master Intermediate
Income Trust

Annual report
9 | 30 | 14

Message from the Trustees	1
About the fund	2
Performance snapshot	4
Interview with your fund's portfolio manager	5
Your fund's performance	12
Terms and definitions	14
Other information for shareholders	15
Important notice regarding Putnam's privacy policy	16
Summary of dividend reinvestment plans	17
Trustee approval of management contract	19
Financial statements	24
Federal tax information	94
Shareholder meeting results	95
About the Trustees	97
Officers	99

Consider these risks before investing: International investing involves currency, economic, and political risks. Emerging-market securities carry illiquidity and volatility risks. Lower-rated bonds may offer higher yields in return for more risk. Bond investments are subject to interest-rate risk (the risk of bond prices falling if interest rates rise) and credit risk (the risk of an issuer defaulting on interest or principal payments). Interest-rate risk is greater for longer-term bonds, and credit risk is greater for below-investment-grade bonds. Unlike bonds, funds that invest in bonds have fees and expenses. Bond prices may fall or fail to rise over time for several reasons, including general financial market conditions, changing market perceptions of the risk of default, changes in government intervention, and factors related to a specific issuer or industry. These factors may also lead to periods of high volatility and reduced liquidity in the bond markets. Funds that invest in government securities are not guaranteed. Mortgage-backed securities are subject to prepayment risk and the risk that they may increase in value less when interest rates decline and decline in value more when interest rates rise. You can lose money by investing in the fund. The fund's shares trade on a stock exchange at market prices, which may be lower than the fund's net asset value.

Message from the Trustees

Dear Fellow Shareholder:

With the U.S. economy on firmer footing, the U.S. Federal Reserve has wound down its quantitative easing efforts, which were achieved through purchases of government securities and other financial assets. Now, a new chapter begins for the markets, including the likelihood that the central bank will initiate interest-rate increases in the middle of next year. At the same time, changes are likely at hand in fixed-income markets. With the Fed ending its asset purchases, the government will need to find other buyers for its newly issued securities.

The hope is that the recovery today is strong enough to foster self-sustaining growth without the help of the central bank. In fact, after years of modest growth, it appears that the U.S. economy is positioned to expand at a more vigorous pace, as indicated by an annualized GDP growth rate above 4% in the second quarter.

Amid these transitions, the stock market experienced high volatility, with sharp declines in October. These drops may be tied to the Ebola health crisis, ongoing global threats, and divergent growth rates between the U.S. and non-U.S. economies. Still, strong domestic growth, we believe, bodes well for corporate earnings and equity prices, even if interest rates were to rise. Also of importance, U.S. corporate revenue growth has started to bounce back.

During this transitional time for the markets and the economy, we encourage you to meet with your financial advisor to ensure that your portfolio is properly diversified and aligned with your objectives and risk tolerance. Keep in mind that Putnam offers a wide range of strategies for all environments, as well as new ways of thinking about building portfolios for today's markets.

As always, thank you for investing with Putnam.

Respectfully yours,

Robert L. Reynolds
President and Chief Executive Officer
Putnam Investments

Jameson A. Baxter
Chair, Board of Trustees

November 13, 2014

Performance
snapshot

Annualized total return (%) comparison as of 9/30/14

Data are 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 12–13 for additional performance information, including fund returns at market price. Index and Lipper results should be compared with 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.

4 Master Intermediate Income Trust

Interview with your fund's portfolio manager

D. William Kohli

Bill, what was the bond market environment like during the 12 months ended September 30, 2014?

Overall, it was generally a favorable environment for taking credit and prepayment risk, but there were periods of volatility. The major event marking the early months of the period was the Federal Reserve beginning the process of winding down its bond-buying program, which was announced in December and launched in January. The Fed concluded its bond purchases in late October 2014.

The central bank's initial \$10 billion reduction in bond purchases coincided with lackluster fourth-quarter 2013 economic data and an upheaval in emerging-market [EM] currencies, which caused investors to assume a more risk-averse posture. As a result, asset flows shifted toward the relative safety of U.S. Treasuries, and pushed the yield on the 10-year note down to 2.61% at the beginning of February. Soon after, however, with EM stress abating, credit markets were buoyed by investors dismissing weak economic data, in large part, as a function of severe winter weather affecting some of the country's most densely populated regions.

As we moved into spring, concern about capital flight from Russia due to the Ukraine crisis, along with unrest in the Middle East, prompted investors to once again seek the relative safety of Treasuries. Demand for Treasuries also received a boost in June when the European Central Bank [ECB]

Broad market index and fund performance

This comparison shows your fund's performance in the context of broad market indexes for the 12 months ended 9/30/14. See pages 4 and 12–13 for additional fund performance information. Index descriptions can be found on pages 14–15.

Master Intermediate Income Trust 5

implemented a negative deposit rate of -0.10% in the hope of stimulating bank lending to help stave off deflation and bolster eurozone economic growth. Sharply lower yields on sovereign bonds issued by peripheral European countries also indirectly dampened Treasury yields.

Fixed-income markets experienced several bouts of volatility during the final three months of the period. Yields on intermediate- to longer-dated bonds fell globally and most bond market sectors underperformed Treasuries. The high-yield sector saw record outflows in July based on technical factors related to supply and demand, while EM debt faced several idiosyncratic events that disrupted the market, including ongoing tension between Russia and Ukraine, and a technical default by Argentina on its restructured debt.

At the end of August, 10- and 30-year Treasury yields reached 2.34% and 3.08% , respectively — their lows for the period — as geopolitical anxieties and concern about European economic growth once again

Credit quality overview

Credit qualities are shown as a percentage of the fund's net assets as of 9/30/14. A bond rated Baa or higher (Prime-3 or higher, for short-term debt) is considered investment grade. The chart reflects Moody's ratings; percentages may include bonds or derivatives not rated by Moody's but rated by Standard & Poor's (S&P) or, if unrated by S&P, by Fitch ratings, and then included in the closest equivalent Moody's rating based on analysis of these agencies' respective ratings criteria. Moody's ratings are used in recognition of its prominence among rating agencies and breadth of coverage of rated securities. To be announced (TBA) mortgage commitments, if any, are included based on their

issuer ratings. Ratings and portfolio credit quality may vary over time.

Derivative instruments, including forward currency contracts, are only included to the extent of any unrealized gain or loss on such instruments and are shown in the not-rated category. Cash is also shown in the not-rated category. Derivative offset values are included in the not-rated category and may result in negative weights. The fund itself has not been rated by an independent rating agency.

6 Master Intermediate Income Trust

“Strategies that attempt to benefit from prepayment risk have historically done well during periods of rising interest rates.”

Bill Kohli

bolstered demand for Treasuries. Longer-dated bonds also benefited from reduced concern about inflation, as the price index for personal consumption expenditures — the Fed’s preferred inflation gauge — stayed below the central bank’s 2% target rate.

The U.S. dollar rose sharply, and in September, traded at its highest level versus the euro since 2008. The dollar advanced as a strengthening U.S. economy prompted investors to conclude that the Fed is likely to begin raising the federal funds rate — its target for short-term interest rates — in the relatively near future, possibly during the first half of 2015. Additionally, divergent policy stances between the Fed and the ECB — with the Fed preparing to tighten monetary policy while the ECB appears likely to continue easing policy — also fueled dollar strength.

Top holdings

This table shows the fund’s top holdings across three key sectors and the percentage of the fund’s net assets that each represented as of 9/30/14. Short-term holdings and derivatives, if any, are excluded. Holdings may vary over time.

The fund generated a solid return at net asset value for the past 12 months. What factors fueled this favorable outcome?

Our mortgage credit and prepayment strategies were the biggest contributors to performance. Within mortgage credit, our investments in subordinated mezzanine commercial mortgage-backed securities [CMBS] and non-agency residential mortgage-backed securities [RMBS] were the biggest contributors to the fund's performance. Our CMBS holdings benefited from supportive commercial real estate fundamentals amid an improving U.S. economy, along with persistent investor demand for higher-yielding bonds. Our non-agency RMBS positions also attracted investors due to their relatively high yields. Within this sector, our holdings of pay-option adjustable-rate mortgage-backed securities [pay-option ARMs] were the main contributors to performance.

Our prepayment strategies, which we implemented with securities such as interest-only and inverse interest-only collateralized

Comparison of top sector weightings

This chart shows how the fund's top weightings have changed over the past six months. Allocations are shown as a percentage of the fund's net assets. Cash and net other assets, if any, represent the market value weights of cash, derivatives, short-term securities, and other unclassified assets in the portfolio. Current period summary information may differ from the portfolio schedule included in the financial statements due to the inclusion of derivative securities, any interest accruals, and the use of different classifications of securities for presentation purposes. Holdings and allocations may vary over time.

Cash positions may represent collateral used to cover certain derivatives contracts.

8 Master Intermediate Income Trust

mortgage obligations [CMOs], were also major contributors to the fund's performance. Although rates fell during the period, the decline wasn't severe enough to trigger substantial refinancing of the mortgages underlying our CMO

holdings. As a result, prepayment speeds that were slower than expected provided a tailwind to our interest-only CMO positions.

Elsewhere, investments in high-yield bonds provided a further boost to the fund's return for the period as a whole, although outflows from the asset class hindered performance in July and September. During most of the period, the asset class benefited from consistent investor demand, solid corporate fundamentals, a historically low level of defaults, an improving U.S. economy, and a rallying stock market.

Overseas, our investments in EM debt modestly aided performance, despite some late-period volatility. The fund benefited most from U.S.-dollar-denominated holdings in Argentina. The performance of these positions took a hit in August, however, due to Argentina's failure to reach a settlement with holdout creditors. This development blocked coupon payments on Argentina's restructured debt, resulting in a technical default.

How did your active currency strategy affect performance?

Our currency strategy was also a notable contributor, primarily during the final three months of the period when the U.S. dollar outpaced every other major currency. During that time, our long-dollar strategy bolstered the fund's return, as did short positions in the euro, Japanese yen, Swiss franc, and Swedish krona, all of which weakened relative to the dollar.

ABOUT DERIVATIVES

Derivatives are an increasingly common type of investment instrument, the performance of which is *derived* from an underlying security, index, currency, or other area of the capital markets. Derivatives employed by the fund's managers generally serve one of two main purposes: to implement a strategy that may be difficult or more expensive to invest in through traditional securities, or to hedge unwanted risk associated with a particular position.

For example, the fund's managers might use currency forward contracts to capitalize on an anticipated change in exchange rates between two currencies. This approach would require a significantly smaller outlay of capital than purchasing traditional bonds denominated in the underlying currencies. In another example, the managers may identify a bond that they believe is undervalued relative to its risk of default, but may seek to reduce the interest-rate risk of that bond by using interest-rate swaps, a derivative through which two parties "swap" payments based on the movement of certain rates.

Like any other investment, derivatives may not appreciate in value and may lose money. Derivatives may amplify traditional investment risks through the creation of leverage and may be less liquid than traditional securities. And because derivatives typically represent contractual agreements between two financial institutions, derivatives entail "counterparty risk," which is the risk that the other party is unable or unwilling to pay. Putnam monitors the counterparty risks we assume. For example, Putnam often enters into collateral agreements that require the counterparties to post collateral on a regular basis to cover their obligations to the fund. Counterparty risk for exchange-traded futures and centrally cleared swaps is mitigated by the daily exchange of margin and other safeguards against default through their respective clearinghouses.

Which strategies didn't work as well this past year?

Several interest-rate and yield-curve strategies hindered performance during the period. The fund was defensively positioned for a rising-rate environment in the United States, resulting in an overall duration — a key measure of interest-rate sensitivity — that was negative on a net basis. Additionally, during the period's second half, a significant amount of risk was allocated to an outright short position on the 10-year part of the yield curve. This positioning was particularly detrimental in August when rates fell. However, it helped the fund in September when rates rose. Unfortunately, the negative impact from August was greater than September's recovery, and for the period as a whole, our positioning hampered the fund's result.

Outside the United States, a long-duration position in Greece held against a short position in Germany detracted as Greek yields widened versus German yields. In contrast, our long Europe versus short U.S. spread trade on the short-term portion of the yield curve aided results as monetary policy between the Fed and ECB diverged further. The net result of our non-U.S. duration strategies was positive, partially offsetting the negative impact of our U.S. duration positioning.

How did you use derivatives during the period?

We used bond futures and interest-rate swaps to take tactical positions at various points along the yield curve. We also employed interest-rate swaps and "swaptions" — which give us the option to enter into a swap contract — to hedge the interest-rate risk associated with our CMO holdings. Additionally, we used total return swaps as a hedging tool and to help manage the fund's sector exposure, as well as credit default swaps to hedge the fund's credit risk. Lastly, we utilized currency forward contracts to hedge the foreign exchange risk associated with non-U.S. bonds and to efficiently gain exposure to foreign currencies.

What is your outlook for the coming months, and how are you positioning the fund?

Near the end of the period, the Bureau of Economic Analysis revised second-quarter gross domestic product [GDP] higher to an annual rate of 4.6%, the strongest growth since late 2011. This upward revision was another sign that the U.S. recovery had regained steam after a rough start to the year. Given stronger job growth, along with a pickup in consumer and business spending, we believe third-quarter GDP could be in the 3.0% to 3.5% range. If this growth trend continues, we think it sets the stage for the Fed to begin raising the federal funds rate sometime during the first half of 2015.

Globally, we think the outlook for European rates is more favorable than the outlook for U.S. rates because the ECB is likely to keep rates low for some time while the Fed appears poised to begin raising rates. So, in our view, European duration looks comparatively more appealing to us over the balance of this year and into 2015.

We expect to maintain a short position on the 10-year part of the Treasury yield curve, since we believe this is the area of the curve that will be most affected by the conclusion of the Fed's bond-buying program. Additionally, we will continue our efforts to minimize overall interest-rate risk in the portfolio.

We plan to maintain our diversified mortgage, corporate, and sovereign credit exposure primarily through allocations to mezzanine CMBS, high-yield bonds, and peripheral European sovereign bonds, respectively. Concerning prepayment risk, we expect to continue to seek to capitalize on anticipated slower prepayment speeds through allocations to agency interest-only CMOs.

Strategies that attempt to benefit from prepayment risk have historically done well during periods of rising interest rates. Lastly, as of period-end, yields remained reasonably attractive among specific subsectors of the non-agency RMBS market, in our view. We remain positive on several of these subsectors, particularly pay-option ARMs.

Thanks for your time and for bringing us up to date, Bill.

The views expressed in this report are exclusively those of Putnam Management and are subject to change. 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 D. William Kohli is Co-Head of Fixed Income at Putnam. He has an M.B.A. from the Haas School of Business at the University of California, Berkeley, and a B.A. from the University of California, San Diego. Bill joined Putnam in 1994 and has been in the investment industry since 1986.

In addition to Bill, your fund's portfolio managers are Michael J. Atkin, Kevin F. Murphy, Michael V. Salm, and Paul D. Scanlon, CFA.

How closed-end funds differ from open-end funds

Closed-end funds and open-end funds share many common characteristics but also have some key differences that you should understand as you consider your portfolio strategies.

More assets at work Open-end funds are subject to ongoing sales and redemptions that can generate transaction costs for long-term shareholders. Closed-end funds, however, are typically fixed pools of capital that do not need to hold cash in connection with sales and redemptions, allowing the funds to keep more assets actively invested.

Traded like stocks Closed-end fund shares are traded on stock exchanges and, as a result, their prices fluctuate because of the influence of several factors.

They have a market price Like an open-end fund, a closed-end fund has a per-share net asset value (NAV). However, closed-end funds also have a "market price" for their shares — which is how much you pay when you buy shares of the fund, and how much you receive when you sell them.

When looking at a closed-end fund's performance, you will usually see that the NAV and the market price differ. The market price can be influenced by several factors that cause it to vary from the NAV, including fund distributions, changes in supply and demand for the fund's shares, changing market conditions, and investor perceptions of the fund or its investment manager. A fund's performance at market price typically differs from its results at NAV.

Putnam Master Intermediate Income Trust

Master Intermediate Income Trust 11



Your fund's performance

This section shows your fund's performance, price, and distribution information for periods ended September 30, 2014, the end of its most recent fiscal year. Performance should always be considered in light of a fund's investment strategy. Data represent 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 9/30/14

	NAV	Market price
Annual average		
Life of fund (since 4/29/88)	6.73%	6.49%
10 years	72.90	69.10
Annual average	5.63	5.39
5 years	46.93	31.08
Annual average	8.00	5.56
3 years	25.95	20.22
Annual average	7.99	6.33
1 year	8.55	9.56

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

Comparative index returns For periods ended 9/30/14

	Barclays Government/Credit Bond Index	Citigroup Non-U.S. World Government Bond Index	JPMorgan Global High Yield Index†	Lipper Closed-end General Bond Funds category average*
Annual average				
Life of fund (since 4/29/88)	6.81%	5.91%	—	7.53%
10 years	56.70	47.88	126.19%	123.88
Annual average	4.59	3.99	8.50	8.11
5 years	23.26	5.15	67.53	71.39
Annual average	4.27	1.01	10.87	10.74
3 years	7.82	-3.35	37.91	36.53
Annual average	2.54	-1.13	11.31	10.58
1 year	4.08	-0.99	7.59	10.85

Index and Lipper results should be compared with 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 net asset value.

*Over the 1-year, 3-year, 5-year, 10-year, and life-of-fund periods ended 9/30/14, there were 30, 23, 19, 16, and 4 funds, respectively, in this Lipper category.

†The JPMorgan Global High Yield Index was introduced on 12/31/93, which post-dates the fund's inception.

Fund price and distribution information For the 12-month period ended 9/30/14

Distributions		
Number	12	
Income	\$0.312000	
Capital gains	—	
Total	\$0.312000	
Share value	NAV	Market price
9/30/13	\$5.50	\$4.88
9/30/14	5.65	5.03
Current rate (end of period)	NAV	Market price
Current dividend rate*	5.52%	6.20%

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

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

Master Intermediate Income Trust 13

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, divided by the number of outstanding 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.

Fixed-income terms

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

Mortgage-backed security (MBS), also known as a mortgage “pass-through,” is a type of asset-backed security that is secured by a mortgage or collection of mortgages. The following are types of MBSs:

- Agency “pass-through” has its principal and interest backed by a U.S. government agency, such as the Federal National Mortgage Association (Fannie Mae), Government National Mortgage Association (Ginnie Mae), and Federal Home Loan Mortgage C