

WESTERN ASSET MUNICIPAL HIGH INCOME FUND INC.

Form N-CSR

December 23, 2015

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 811-05497

Western Asset Municipal High Income Fund Inc.

(Exact name of registrant as specified in charter)

620 Eighth Avenue, 49th Floor, New York, NY 10018

(Address of principal executive offices) (Zip code)

Robert I. Frenkel, Esq.

Legg Mason & Co., LLC

100 First Stamford Place

Stamford, CT 06902

(Name and address of agent for service)

Registrant's telephone number, including area code: (888) 777-0102

Date of fiscal year end: October 31

Date of reporting period: October 31, 2015

ITEM 1. REPORT TO STOCKHOLDERS.

The **Annual** Report to Stockholders is filed herewith.

Annual Report

October 31, 2015

WESTERN ASSET
MUNICIPAL HIGH
INCOME FUND INC.
(MHF)

INVESTMENT PRODUCTS: NOT FDIC INSURED NO BANK GUARANTEE MAY LOSE VALUE

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Fund objective

The Fund seeks high current income exempt from federal income taxes.

The Fund invests primarily in intermediate- and long-term municipal debt securities issued by state and local governments. However, the Fund may invest in municipal obligations of any maturity.

Letter from the chairman

Dear Shareholder,

We are pleased to provide the annual report of Western Asset Municipal High Income Fund Inc. for the twelve-month reporting period ended October 31, 2015. Please read on for a detailed look at prevailing economic and market conditions during the Fund's reporting period and to learn how those conditions have affected Fund performance.

I am pleased to introduce myself as the new Chairman, President and Chief Executive Officer of the Fund, succeeding Kenneth D. Fuller. I am honored to have been appointed to my new role. During my 27 year career with Legg Mason, I have seen the investment management industry evolve and expand. Throughout these changes, maintaining an unwavering focus on our shareholders and their needs has remained paramount.

As always, we remain committed to providing you with excellent service and a full spectrum of investment choices. We also remain committed to supplementing the support you receive from your financial advisor. One way we accomplish this is through our website, www.lmcef.com. Here you can gain immediate access to market and investment information, including:

Fund prices and performance,

Market insights and commentaries from our portfolio managers, and

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A host of educational resources.
We look forward to helping you meet your financial goals.

Sincerely,

Jane Trust, CFA

Chairman, President and Chief Executive Officer

November 27, 2015

II Western Asset Municipal High Income Fund Inc.

Investment commentary

Economic review

The pace of U.S. economic activity was mixed during the twelve months ended October 31, 2015 (the reporting period). Looking back, the U.S. Department of Commerce's revised figures showed that fourth quarter 2014 U.S. gross domestic product (GDP) growth was 2.1%. First quarter 2015 GDP growth then moderated to 0.6%. This was attributed to a number of factors, including a deceleration in personal consumption expenditures (PCE), along with negative contributions from exports, nonresidential fixed investment, and state and local government spending. Economic activity then accelerated, as second quarter 2015 GDP growth was 3.9%. The upturn was driven by increasing exports, accelerating PCE, declining imports, expanding state and local government spending, and rising nonresidential fixed investment. The U.S. Department of Commerce's second reading for third quarter 2015 GDP growth released after the reporting period ended was 2.1%. Decelerating growth was primarily due to a downturn in private inventory investment and decelerations in exports, PCE, nonresidential fixed investment, state and local government spending, and residential fixed investment.

The labor market significantly improved and was a tailwind for the economy during the reporting period. When the period began, unemployment was 5.8%, as reported by the U.S. Department of Labor. By October 2015, unemployment was 5.0%, its lowest level since April 2008.

The Federal Reserve Board (the Fed) took a number of actions as it sought to meet its dual mandate of fostering maximum employment and price stability. As it has since December 2008, the Fed maintained the federal funds rateⁱⁱⁱ at a historically low range between zero and 0.25% during the twelve months ended October 31, 2015. However, in October 2014 the Fed ended its asset purchase program that was announced in December 2012. In December 2014, the Fed said that it can be patient in beginning to normalize the stance of monetary policy. At its meeting that concluded on July 29, 2015, the Fed said, "The Committee currently anticipates that, even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run." At its meeting that concluded on October 28, 2015, the Fed said, "In determining whether it will be appropriate to raise the target range at its next meeting, the Committee will assess progress both realized and expected toward its objectives of maximum employment and 2 percent inflation."

As always, thank you for your confidence in our stewardship of your assets.

Sincerely,

Jane Trust, CFA

Chairman, President and

Chief Executive Officer

November 27, 2015

All investments are subject to risk including the possible loss of principal. Past performance is no guarantee of future results.

Investment commentary (cont d)

ⁱ Gross domestic product (GDP) is the market value of all final goods and services produced within a country in a given period of time.

ⁱⁱ The Federal Reserve Board (Fed) is responsible for the formulation of U.S. policies designed to promote economic growth, full employment, stable prices and a sustainable pattern of international trade and payments.

ⁱⁱⁱ The federal funds rate is the rate charged by one depository institution on an overnight sale of immediately available funds (balances at the Federal Reserve) to another depository institution; the rate may vary from depository institution to depository institution and from day to day.

IV Western Asset Municipal High Income Fund Inc.

Fund overview

Q. What is the Fund's investment strategy?

A. The Fund seeks high current income exempt from federal income taxes. The Fund invests primarily in intermediate- and long-term municipal debt securities issued by state and local governments including U.S. territories and possessions, political subdivisions, agencies and public authorities (municipal obligations). However, the Fund may invest in municipal obligations of any maturity. The Fund may invest up to 100% of its assets in municipal obligations rated below investment grade (commonly referred to as junk bonds). Investment grade securities are those rated in the Baa/BBB categories or above by at least one National Recognized Statistical Rating Organization (NRSRO) that provides such a rating or unrated securities that we determine to be of comparable credit quality. The Fund may invest in non-publicly traded municipal securities, zero-coupon municipal obligations and non-appropriation or other municipal lease obligations. The Fund may hold securities or use investment techniques that provide for payments based on or derived from the performance of an underlying asset, index or other economic benchmark.

At Western Asset Management Company (Western Asset), the Fund's subadviser, we utilize a fixed-income team approach, with decisions derived from interaction among various investment management sector specialists. The sector teams are comprised of Western Asset's senior portfolio management personnel, research analysts and an in-house economist. Under this team approach, management of client fixed-income portfolios will reflect a consensus of interdisciplinary views within the Western Asset organization. The individuals responsible for development of investment strategy, day-to-day portfolio management, oversight and coordination of the Fund are S. Kenneth Leech, Robert E. Amodeo, David T. Fare and Dennis J. McNamara.

Q. What were the overall market conditions during the Fund's reporting period?

A. Most spread sectors (non-Treasuries) posted positive returns, but generated mixed results versus equal-durationⁱ Treasuries over the twelve months ended October 31, 2015. The fixed income market was volatile at times given mixed global economic data, uncertainties regarding future Federal Reserve Board (Fed) monetary policy and a number of geopolitical issues. Assuming greater risk was generally not rewarded during the reporting period.

Short-term Treasury yields moved higher, whereas long-term Treasury yields declined during the twelve months ended October 31, 2015. Two-year Treasury yields rose from 0.50% at the beginning of the period to 0.75% at the end of the period. Their peak of 0.82% occurred in mid-September 2015 and they were as low as 0.44% on January 15, 2015. Ten-year Treasury yields were 2.35% at the beginning of the period and ended the period at 2.16%. Their peak of 2.50% was on June 10, 2015 and their low of 1.68% occurred at the end of January and early February 2015.

The municipal bond market outperformed its taxable bond counterpart during the twelve-month reporting period. Over that time, the Barclays Municipal Bond Indexⁱⁱⁱ and the Barclays U.S. Aggregate Index^{iv} returned 2.87% and 1.96%, respectively. The overall creditworthiness of the municipal bond

Fund overview (cont d)

market has improved as the U.S. economy continues to expand, resulting in a better labor market and higher consumer confidence levels. After generating mixed results over the first seven months of the reporting period, the municipal market outperformed the taxable bond market over the last five months of the period.

Q. How did we respond to these changing market conditions?

A. There were several changes to the Fund during the reporting period. We reduced the Fund's overall risk exposure by paring its duration. Elsewhere, we eliminated the Fund's exposure to Puerto Rico. The Fund employed the use of short U.S. Treasury futures during the reporting period to manage duration. This strategy modestly detracted from performance.

Performance review

For the twelve months ended October 31, 2015, Western Asset Municipal High Income Fund Inc. returned 2.62% based on its net asset value (NAV) and 4.73% based on its New York Stock Exchange (NYSE) market price per share. The Fund's unmanaged benchmark, the Barclays Municipal Bond Index, returned 2.87% for the same period. The Lipper High Yield Municipal Debt Closed-End Funds Category Average^{vi} returned 5.30% over the same time frame. Please note that Lipper performance returns are based on each fund's NAV. Unlike the Fund, many funds within the Lipper peer group utilize leverage.

Certain investors may be subject to the federal alternative minimum tax, and state and local taxes will apply. Capital gains, if any, are fully taxable. Please consult your personal tax or legal adviser.

During the twelve-month period, the Fund made distributions to shareholders totaling \$0.35 per share.* The performance table shows the Fund's twelve-month total return based on its NAV and market price as of October 31, 2015. **Past performance is no guarantee of future results.**

Performance Snapshot as of October 31, 2015

Price Per Share	12-Month Total Return**
\$7.97 (NAV)	2.62%
\$7.47 (Market Price)	4.73%

All figures represent past performance and are not a guarantee of future results.

**** Total returns are based on changes in NAV or market price, respectively. Returns reflect the deduction of all Fund expenses, including management fees, operating expenses, and other Fund expenses. Returns do not reflect the deduction of brokerage commissions or taxes that investors may pay on distributions or the sale of shares.**

Total return assumes the reinvestment of all distributions at NAV.

Total return assumes the reinvestment of all distributions in additional shares in accordance with the Fund's Dividend Reinvestment Plan.

Q. What were the leading contributors to performance?

A. The largest contributor to the Fund's relative performance during the reporting period was its positioning in a number of sectors. In particular, overweights to Industrial Revenue and Health Care were rewarded, as was security selection within

*For the tax character of distributions paid during the fiscal year ended October 31, 2015, please refer to page 27 of this report.

both sectors. An underweight to state and local General Obligation bonds was also positive for performance. Elsewhere, security selection within the Water & Sewer and Transportation sectors was additive for results.

Our quality biases were also beneficial for results. In particular, having an overweight to municipal securities rated BBB, along with an underweight to securities rated AA and AAA, was additive for returns as lower rated municipal bonds outperformed their higher rated counterparts over the twelve-month period.

From a yield curve^{vii} perspective, the Fund maintained an overweight to the 22+ year portion of the municipal yield curve and an underweight to shorter-term securities. This contributed to performance as longer-term securities outperformed shorter-term securities.

Q. What were the leading detractors from performance?

A. The Fund underperformed its benchmark during the reporting period. In addition to the Fund's Treasury futures position, security selection within the Special Tax and Leasing sectors detracted from performance.

The Fund's underperformance versus its Lipper peer group was partially due to the fact that it did not use leverage. In contrast, certain of the funds in the Lipper peer group used leverage, which was advantageous for their performance during the reporting period.

Looking for additional information?

The Fund is traded under the symbol **MHF** and its closing market price is available in most newspapers under the NYSE listings. The daily NAV is available on-line under the symbol **XMHF** on most financial websites. *Barron's* and the *Wall Street Journal's* Monday edition both carry closed-end fund tables that provide additional information. In addition, the Fund issues a quarterly press release that can be found on most major financial websites as well as www.lmcef.com.

In a continuing effort to provide information concerning the Fund, shareholders may call 1-888-777-0102 (toll free), Monday through Friday from 8:00 a.m. to 5:30 p.m. Eastern Time, for the Fund's current NAV, market price and other information.

Thank you for your investment in Western Asset Municipal High Income Fund Inc. As always, we appreciate that you have chosen us to manage your assets and we remain focused on achieving the Fund's investment goals.

Sincerely,

Western Asset Management Company

November 17, 2015

***RISKS:** The Fund's investments are subject to credit risk, inflation risk and interest rate risk. High-yield bonds, known as junk bonds, involve greater credit and liquidity risks than investment grade bonds. As interest rates rise, bond prices fall, reducing the value of the Fund's holdings. Municipal securities purchased by the Fund may be adversely affected by changes in the financial condition of municipal issuers and insurers, regulatory and political developments, uncertainties and public perceptions, and other factors. The Fund may use derivatives, such as options and futures, which can be illiquid, may disproportionately increase losses, and have a potentially large impact on Fund performance.*

Fund overview (cont d)

The mention of sector breakdowns is for informational purposes only and should not be construed as a recommendation to purchase or sell any securities. The information provided regarding such sectors is not a sufficient basis upon which to make an investment decision. Investors seeking financial advice regarding the appropriateness of investing in any securities or investment strategies discussed should consult their financial professional. Portfolio holdings are subject to change at any time and may not be representative of the portfolio managers' current or future investments. The Fund's portfolio composition is subject to change at any time.

All investments are subject to risk including the possible loss of principal. Past performance is no guarantee of future results. All index performance reflects no deduction for fees, expenses or taxes. Please note that an investor cannot invest directly in an index.

The information provided is not intended to be a forecast of future events, a guarantee of future results or investment advice. Views expressed may differ from those of the firm as a whole.

- ⁱ Duration is the measure of the price sensitivity of a fixed-income security to an interest rate change of 100 basis points. Calculation is based on the weighted average of the present values for all cash flows.
- ⁱⁱ The Federal Reserve Board (Fed) is responsible for the formulation of U.S. policies designed to promote economic growth, full employment, stable prices, and a sustainable pattern of international trade and payments.
- ⁱⁱⁱ The Barclays Municipal Bond Index is a market value weighted index of investment grade municipal bonds with maturities of one year or more.
- ^{iv} The Barclays U.S. Aggregate Index is a broad-based bond index comprised of government, corporate, mortgage- and asset-backed issues, rated investment grade or higher, and having at least one year to maturity.
- ^v Net asset value (NAV) is calculated by subtracting total liabilities, including liabilities associated with financial leverage (if any), from the closing value of all securities held by the Fund (plus all other assets) and dividing the result (total net assets) by the total number of the common shares outstanding. The NAV fluctuates with changes in the market prices of securities in which the Fund has invested. However, the price at which an investor may buy or sell shares of the Fund is the Fund's market price as determined by supply of and demand for the Fund's shares.
- ^{vi} Lipper, Inc., a wholly-owned subsidiary of Reuters, provides independent insight on global collective investments. Returns are based on the twelve-month period ended October 31, 2015, including the reinvestment of all distributions, including returns of capital, if any, calculated among the 11 funds in the Fund's Lipper category.
- ^{vii} The yield curve is the graphical depiction of the relationship between the yield on bonds of the same credit quality but different maturities.

Fund at a glance (unaudited)

Investment breakdown (%) as a percent of total investments

[CHART]

The bar graph above represents the composition of the Fund's investments as of October 31, 2015 and October 31, 2014 and does not include derivatives, such as futures contracts. The Fund is actively managed. As a result, the composition of the Fund's investments is subject to change at any time.

Western Asset Municipal High Income Fund Inc. 2015 Annual Report

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Spread duration (unaudited)

Economic exposure October 31, 2015

Total Spread Duration

MHF 6.93 years

Benchmark 5.74 years

Spread duration measures the sensitivity to changes in spreads. The spread over Treasuries is the annual risk-premium demanded by investors to hold non-Treasury securities. Spread duration is quantified as the % change in price resulting from a 100 basis points change in spreads. For a security with positive spread duration, an increase in spreads would result in a price decline and a decline in spreads would result in a price increase. This chart highlights the market sector exposure of the Fund's sectors relative to the selected benchmark sectors as of the end of the reporting period.

Benchmark Barclays Municipal Bond Index

MHF Western Asset Municipal High Income Fund Inc.

Effective duration (unaudited)

Interest rate exposure October 31, 2015

Total Effective Duration

MHF 6.93 years

Benchmark 5.88 years

Effective duration measures the sensitivity to changes in relevant interest rates. Effective duration is quantified as the % change in price resulting from a 100 basis points change in interest rates. For a security with positive effective duration, an increase in interest rates would result in a price decline and a decline in interest rates would result in a price increase. This chart highlights the interest rate exposure of the Fund's sectors relative to the selected benchmark sectors as of the end of the reporting period.

Benchmark Barclays Municipal Bond Index
MHF Western Asset Municipal High Income Fund Inc.

Schedule of investments

October 31, 2015

Western Asset Municipal High Income Fund Inc.

Security	Rate	Maturity Date	Face Amount	Value
Municipal Bonds 96.0%				
<i>Alabama 4.2%</i>				
Jefferson County, AL, Sewer Revenue:				
AGM	5.500%	10/1/53	\$ 400,000	\$ 439,856 ^(a)
Convertible CAB, Subordinated Lien	0.000%	10/1/50	3,020,000	2,063,052 ^(b)
Subordinated Lien Warrants	6.000%	10/1/42	1,120,000	1,259,586
Subordinated Lien Warrants	6.500%	10/1/53	3,000,000	3,433,080
<i>Total Alabama</i>				<i>7,195,574</i>
<i>Arizona 1.9%</i>				
Phoenix, AZ, IDA, Education Revenue, Basis School Inc.	5.000%	7/1/35	1,000,000	1,010,630 ^(c)
Salt Verde, AZ, Financial Corp. Senior Gas Revenue	5.000%	12/1/37	1,500,000	1,680,780
University Medical Center Corp., AZ, Hospital Revenue	6.250%	7/1/29	500,000	592,670 ^(d)
<i>Total Arizona</i>				<i>3,284,080</i>
<i>California 9.6%</i>				
Anaheim, CA, Public Financing Authority Lease Revenue	5.000%	5/1/46	2,000,000	2,211,000
California State PCFA, Water Furnishing Revenue	5.000%	11/21/45	3,000,000	3,087,900 ^(c)
California State Public Works Board, Lease Revenue, Various Capital Project	5.125%	10/1/31	1,500,000	1,714,110
California Statewide CDA, Student Housing Revenue:				
Provident Group-Pomona Properties LLC	5.600%	1/15/36	505,000	505,843
Provident Group-Pomona Properties LLC	5.750%	1/15/45	360,000	349,078
Inland Valley, CA, Development Agency, Successor Agency Tax Allocation Revenue	5.000%	9/1/44	500,000	539,860
M-S-R Energy Authority, CA, Gas Revenue	7.000%	11/1/34	2,000,000	2,839,820
M-S-R Energy Authority, CA, Gas Revenue	6.500%	11/1/39	3,000,000	4,075,920
Redding, CA, Redevelopment Agency, Tax Allocation, Shastec Redevelopment Project	5.000%	9/1/29	600,000	600,210
River Islands, CA, Public Financing Authority Special Tax, Community Facilities				
District No. 2003-1	5.500%	9/1/45	620,000	644,546
<i>Total California</i>				<i>16,568,287</i>
<i>Colorado 4.6%</i>				