Western Asset Investment Grade Income Fund Inc. Form N-CSRS August 30, 2018

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 811-02351

Western Asset Investment Grade 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: December 31

Date of reporting period: June 30, 2018

ITEM 1. REPORT TO STOCKHOLDERS.

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

Semi-Annual Report

June 30, 2018

WESTERN ASSET

INVESTMENT GRADE INCOME FUND INC. (PAI)

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

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Fund objectives

The Fund seeks a high level of current income, consistent with prudent investment risk. Capital appreciation is a secondary investment objective.

The Fund s investment policies provide that the Fund invests at least 80% of its net assets in fixed income securities that are rated in the Baa or BBB categories or above at the time of purchase by one or more Nationally Recognized Statistical Rating Organizations (NRSROs) or unrated securities of comparable quality at the time of purchase (as determined by the adviser); up to 20% in other fixed income securities; and not more than 25% in securities restricted as to resale.

Letter from the president

Dear Shareholder,

We are pleased to provide the semi-annual report of Western Asset Investment Grade Income Fund Inc. for the six-month reporting period ended June 30, 2018. Please read on for Fund performance information and a detailed look at prevailing economic and market conditions during the Fund s reporting period.

Special shareholder notice

Effective March 29, 2018, Western Asset Income Fund changed its name to Western Asset Investment Grade Income Fund Inc. The Fund s shares of common stock continue to trade under its existing New York Stock Exchange symbol PAI. The Fund s CUSIP, 95766T100, did not change.

In addition, also effective March 29, 2018, the Fund invests at least 80% of its net assets in fixed income securities that are rated in the Baa or BBB categories or above at the time of purchase by one or more Nationally Recognized Statistical Rating Organizations (NRSROs) or unrated securities of comparable quality at the time of purchase (as determined by the adviser). To the extent not addressed above, in the event that NRSROs assign different ratings to the same security, Western Asset Management Company, LLC (formerly known as Western Asset Management Company) (Western Asset), the Fund s adviser, will determine which rating it believes best reflects the security s quality and risk at that time. In addition, the Fund may invest up to 20% in other fixed income securities, and not more than 25% in securities restricted as to resale. The Fund s 80% investment policy may be changed by the Board of Directors without shareholder approval upon 60 days prior notice to shareholders. In addition, convertible bonds and preferred securities may be treated as fixed income securities for purposes of the policy and so, if appropriately rated, would qualify for the 80% test. The Fund s investment objectives remain unchanged.

Prior to March 29, 2018, the Fund s investment policies provided that its portfolio be invested as follows: at least 75% in

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debt securities rated within the four highest grades, and in government securities, bank debt, commercial paper, cash or cash equivalents; up to 25% in other debt securities, convertible bonds, convertible preferred and preferred stock; and not more than 25% in securities restricted as to resale. Trust preferred interests and capital securities are considered debt securities and not preferred stock for purposes of the foregoing guidelines. The Fund continues to comply with these policies. For more information, please contact the Fund at 1-888-777-0102.

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

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

Sincerely,

Jane Trust, CFA

President and Chief Executive Officer

July 27, 2018

Western Asset Investment Grade Income Fund Inc.

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Investment commentary

Economic review

Economic activity in the U.S. was mixed during the six months ended June 30, 2018 (the reporting period). Looking back, the U.S. Department of Commerce reported that revised fourth quarter 2017 U.S. gross domestic product (GDP growth was 2.3%. GDP growth then moderated to a revised 2.2% during the first quarter of 2018. Finally, the U.S. Department of Commerce s initial reading for second quarter 2018 GDP growth released after the reporting period ended was 4.1%. The acceleration in GDP growth in the second quarter reflected positive contributions from personal consumption expenditures (PCE), exports, nonresidential fixed investment, federal government spending and state and local government spending. These were partly offset by negative contributions from private inventory investment and residential fixed investment. Imports, which are a subtraction in the calculation of GDP, increased.

Job growth in the U.S. was solid overall and supported the economy during the reporting period. When the reporting period ended on June 30, 2018, the unemployment rate was 4.0%, as reported by the U.S. Department of Labor. While the unemployment rate ticked up from 3.8% to 4.0% in June, the increase was largely attributed to an increase in the workforce participation rate. The percentage of longer-term unemployed moved higher during the reporting period. In June 2018, 23.0% of Americans looking for a job had been out of work for more than six months, versus 21.5% when the period began.

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Market review

Q. How did the Federal Reserve Board (the Fedi respond to the economic environment?

A. The Fed increased the federal funds rateⁱⁱⁱ twice during the reporting period. Looking back, at its meeting that concluded on September 20, 2017 before the reporting period began the Fed kept rates on hold, but reiterated its intention to begin reducing its balance sheet. At its meeting that ended on December 13, 2017, the Fed raised rates to a range between 1.25% and 1.50%. As expected, the Fed kept rates on hold at its meeting that concluded on January 31, 2018. However, at its meeting that ended on March 21, 2018, the Fed again raised the federal funds rate, moving it to a range between 1.50% and 1.75%. Finally, at its meeting that concluded on June 13, 2018, the Fed raised the federal funds rate to a range between 1.75% and 2.00%.

Q. Did Treasury yields trend higher or lower during the reporting period?

A. Both short-term and longer-term Treasury yields moved higher during the six-month reporting period ended June 30, 2018. The yield for the two-year Treasury note began the reporting period at 1.89% the low for the period and ended the period at 2.52%. The peak for the period of 2.59% occurred on several occasions in May and June 2018. The yield for the ten-year Treasury began the reporting period at 2.40% the low for the period and ended the period at 2.85%. The high for the period of 3.11% took place on May 17, 2018.

Q. What factors impacted the spread sectors (non-Treasuries) during the reporting period?

A. Most spread sectors generally posted weak results during the reporting period. Performance fluctuated given changing expectations for global growth, uncertainties regarding future central bank monetary policy and concerns over a global trade war. All told, the broad U.S. bond market, as measured by the Bloomberg Barclays U.S. Aggregate Index^{iv}, returned -1.62% during the six-month reporting period ended June 30, 2018.

Q. How did the high-yield bond market perform over the reporting period?

A. The U.S. high-yield bond market, as measured by the Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Cap Index returned 0.16% for the six months ended June 30, 2018. The high-yield market posted a modest gain during the first month of the reporting period. Those gains were then erased in February and March 2018. This turnaround was triggered by a number of factors, including fears that the Fed may take a more aggressive approach to rate hikes, trade war concerns and high-profile issues in the technology industry. However, the high yield market then rallied in April, was relatively flat in May and moved higher in June 2018.

Performance review

For the six months ended June 30, 2018, Western Asset Investment Grade Income Fund Inc. returned -4.17% based on its net asset value (NAV^i and -10.58% based on its New York Stock Exchange (NYSE) market price per share. The Fund sunmanaged benchmarks, the Bloomberg Barclays U.S. Corporate High Yield Index in and the Bloomberg Barclays U.S. Credit Index in, returned 0.16% and -2.99%, respectively, for the same period. The Lipper Corporate Debt Closed-End Funds BBB-Rated Category Average returned -2.86% over the same time frame. Please note

Western Asset Investment Grade Income Fund Inc.

Investment commentary (cont d)

that Lipper performance returns are based on each fund s NAV.

During this six-month period, the Fund made distributions to shareholders totaling \$0.35 per share. As of June 30, 2018, the Fund estimates that all of the distributions were sourced from net investment income.* The performance table shows the Fund s six-month total return based on its NAV and market price as of June 30, 2018. **Past performance is no guarantee of future results.**

Performance Snapshot as of June 30, 2018 (upandited)

Price Per Share

6-Month Total Return**

\$14.41 (NAV) \$13.75 (Market Price) -4.17% -10.58%

All figures represent past performance and are not a guarantee of future results. Performance figures for periods shorter than one year represent cumulative figures and are not annualized.

** 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, including returns of capital, if any, at NAV.

Total return assumes the reinvestment of all distributions, including returns of capital, if any, in additional shares in accordance with the Fund s Dividend Reinvestment Plan.

Looking for additional information?

The Fund is traded under the symbol PAI and its closing market price is available in most newspapers under the NYSE listings. The daily NAV is available on-line under the symbol XPAIX 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 (click on the name of the Fund).

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 Investment Grade 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,

Jane Trust, CFA

President and Chief Executive Officer

July 27, 2018

*This estimate is not for tax purposes. The Fund will issue a Form 1099 with final composition of the distributions for tax purposes after year-end. A return of capital is not taxable and results in a reduction in the tax basis of a shareholder s investment. For more information about a distribution s composition, please refer to the Fund s distribution press release or, if applicable, the Section 19 notice located in the press release section of our website, www.lmcef.com (click on the name of the Fund).

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RISKS: The Fund is a diversified closed-end management investment company designed primarily as a long-term investment and not as a trading vehicle. The Fund is not intended to be a complete investment program and, due to the uncertainty inherent in all investments, there can be no assurance that the Fund will achieve its investment objectives. The Fund s common stock is traded on the New York Stock Exchange. Similar to stocks, the Fund s share price will fluctuate with market conditions and, at the time of sale, may be worth more or less than the original investment. Shares of closed-end funds often trade at a discount to their net asset value. Diversification does not assure against market loss. The Fund s investments are subject to a number of risks, including interest rate, credit and inflation risks. As interest rates rise, bond prices fall, reducing the value of a fixed-income investment s price. The Fund may invest in high-yield bonds (commonly known as junk bonds), which are rated below investment grade and carry more risk than higher-rated securities. To the extent that the Fund invests in asset-backed, mortgage-backed or mortgage related securities, its exposure to prepayment and extension risks may be greater than investments in other fixed-income securities. Leverage may result in greater volatility of NAV and the market price of common shares and increases a shareholder s risk of loss. The Fund may invest, to a limited extent, in foreign securities, including emerging markets, which are subject to additional risks. The Fund may make significant investments in derivative instruments. Derivative instruments can be illiquid, may disproportionately increase losses, and have a potentially large impact on Fund performance.

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.

Western Asset Investment Grade Income Fund Inc.

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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 (the 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 The Bloomberg 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 The Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Cap Index is an index of the 2% Issuer Cap component of the Bloomberg Barclays U.S. Corporate High Yield Index, which covers the U.S. dollar-denominated, non-investment grade, fixed-rate, taxable corporate bond market.
- vi Net asset value (NAV) is calculated by subtracting total liabilities and outstanding preferred stock (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.
- vii The Bloomberg Barclays U.S. Corporate High Yield Index covers the universe of fixed-rate, non-investment grade debt, including corporate and non-corporate sectors. Pay-in-kind (PIK) bonds, Eurobonds and debt issues from countries designated as emerging markets are excluded, but Canadian and global bonds (SEC registered) of issuers in non-emerging market countries are included. Original issue zero coupon bonds, step-up coupon structures and 144-A securities are also included.
- viii The Bloomberg Barclays U.S. Credit Index is an index composed of corporate and non-corporate debt issues that are investment grade (rated Baa3/BBB- or higher).
- ix Lipper, Inc., a wholly-owned subsidiary of Reuters, provides independent insight on global collective investments. Returns are based on the six-month period ended June 30, 2018, including the reinvestment of all distributions, including returns of capital, if any, calculated among the 6 funds in the Fund s Lipper category.
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$Fund\ at\ a\ glance\ ({\tt unaudited})$

Investment breakdown (%) as a percent of total investments

The bar graph above represents the Fund s portfolio as of June 30, 2018 and December 31, 2017, and does not include derivatives such as futures contracts. The Fund s portfolio is actively managed. As a result, the composition of its portfolio holdings and sectors is subject to change at any time.

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Spread duration (unaudited)

Economic exposure June 30, 2018

Total Spread Duration

PAI 8.18 years Benchmark 6.97 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.

ABS Asset-Backed Securities

Benchmark Bloomberg Barclays U.S. Credit Index

EM Emerging Markets HY High Yield

IG Credit Investment Grade Credit

PAI Western Asset Investment Grade Income Fund Inc.

Western Asset Investment Grade Income Fund Inc. 2018 Semi-Annual Report

Effective duration (unaudited)

Interest rate exposure June 30, 2018

Total Effective Duration

PAI 6.90 years Benchmark 7.02 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 sectors relative to the selected benchmark sectors as of the end of the reporting period.

Benchmark Bloomberg Barclays U.S. Credit Index

EM Emerging Markets HY High Yield

IG Credit Investment Grade Credit

PAI Western Asset Investment Grade Income Fund Inc.

Western Asset Investment Grade Income Fund Inc. 2018 Semi-Annual Report

Schedule of investments (unaudited)

June 30, 2018

Western Asset Investment Grade Income Fund Inc.

		Maturity	Face	
Security	Rate	Date	Amount	Value
Corporate Bonds & Notes 91.3%				
Consumer Discretionary 7.3%				
Auto Components 0.6%				
ZF North America Capital Inc., Senior Notes	4.750%	4/29/25	\$ 740,000	\$ 740,971 (a)
Automobiles 0.7%				
Ford Motor Credit Co., LLC, Senior Notes	8.125%	1/15/20	410,000	439,223
General Motors Co., Senior Notes	6.600%	4/1/36	170,000	184,480
General Motors Co., Senior Notes	5.200%	4/1/45	20,000	18,424
General Motors Co., Senior Notes	6.750%	4/1/46	310,000	344,557
Total Automobiles				986,684
Hotels, Restaurants & Leisure 0.5%				
GLP Capital LP/GLP Financing II Inc., Senior Notes	5.250%	6/1/25	160,000	160,800
GLP Capital LP/GLP Financing II Inc., Senior Notes	5.375%	4/15/26	180,000	178,650
McDonald s Corp., Senior Notes	4.700%	12/9/35	150,000	156,775
McDonald s Corp., Senior Notes	4.875%	12/9/45	230,000	242,394
Total Hotels, Restaurants & Leisure				738,619
Household Durables 0.3%				
Newell Brands, Inc., Senior Notes	4.200%	4/1/26	480,000	464,160
Media 5.2%				
21st Century Fox America Inc., Senior Notes	6.550%	3/15/33	545,000	652,272
21st Century Fox America Inc., Senior Notes	7.750%	12/1/45	130,000	183,831
CCO Holdings LLC/CCO Holdings Capital Corp., Senior Notes	5.125%	5/1/27	420,000	394,013 (a)
Charter Communications Operating LLC/Charter Communications Operating Capital, Senior				
Secured Notes	5.375%	5/1/47	350,000	318,940
Charter Communications Operating LLC/Charter Communications Operating Capital Corp.,				
Senior Secured Notes	6.384%	10/23/35	110,000	115,250
Charter Communications Operating LLC/Charter Communications Operating Capital Corp.,				
Senior Secured Notes	6.484%	10/23/45	260,000	274,942
Comcast Corp., Senior Notes	6.450%	3/15/37	220,000	261,973
Comcast Corp., Senior Notes	6.950%	8/15/37	160,000	201,188
Comcast Corp., Senior Notes				