

Supplement dated April 23, 2015 to Prospectus dated April 28, 2014

This supplement contains information which amends, supplements or modifies certain information contained in the Prospectus of HMS Income Fund, Inc. (the "Company") dated April 28, 2014 (as supplemented and amended, the "Prospectus"). This supplement is part of, and should be read in conjunction with, the Prospectus. The Prospectus has been filed with the Securities and Exchange Commission and is available at www.sec.gov or by calling (888) 446-3773. Capitalized terms used in this supplement have the same meanings as in the Prospectus, unless otherwise stated herein.

You should carefully consider the "Risk Factors" beginning on page 26 of the Prospectus before you decide to invest.

This supplement updates the Prospectus as follows: reflects the Company's entry into: (i) an amendment to the Amended and Restated Conditional Fee Waiver Agreement with the Advisers, (ii) an amendment to the Expense Support and Conditional Reimbursement Agreement dated November 11, 2013 with the Adviser, (iii) an amendment to the Expense Support and Conditional Reimbursement Agreement dated December 30, 2013 with the Adviser, and (iv) an amendment to the Waiver of Administrative Expenses with the Advisers.

This supplement amends the Prospectus as follows:

PROSPECTUS SUMMARY

This supplement replaces the section entitled "Prospectus Summary-Management and Incentive Fee Waiver" on page 11 of the Prospectus with the following:

On May 31, 2012, we and our Advisers entered into a conditional fee waiver agreement and subsequent amendments, pursuant to which, for a period from June 4, 2012 to December 31, 2013, our Advisers can waive all fees upon the occurrence of any event that, in our Advisers' sole discretion, is deemed necessary, including, but neither limited to nor automatically triggered by, our estimate that a distribution declared and payable to our stockholders during the fee waiver period represents, or would represent when paid, a return of capital for U.S. federal income tax purposes. We refer to this conditional fee waiver agreement, as amended from time to time, as the "Conditional Fee Waiver Agreement." Further, the agreement contains a clause which states that at the sole and absolute discretion of our board of directors, in future periods, previously waived fees may be paid to our Advisers if and only to the extent that our cumulative net increase in net assets resulting from operations exceeds the amount of cumulative distributions paid to stockholders. The previously waived fees are potentially subject to repayment by us, if at all, within a period not to exceed three years from the date of each respective fee waiver.

On December 30, 2013, we and our Advisers agreed to an amendment to the Conditional Fee Waiver Agreement which extended the term of the fee waiver with respect to our Adviser through December 31, 2014. The terms of the fee waiver were not extended with respect to the Sub-Adviser, whose waiver expired on December 31, 2013 (except with respect to a subordinated incentive fee on income payable for the period October 1, 2014 to December 31, 2014, which the Sub-Adviser agreed to waive).

On April 15, 2015, we and our Advisers agreed to a further amendment (the "Fee Waiver Amendment") to the Conditional Fee Waiver Agreement. Under the Fee Waiver Amendment, our Advisers have agreed to extend the term of the fee waiver with respect to our Adviser through December 31, 2015. The terms of the fee waiver were not extended with respect to our Sub-Adviser (except for the subordinated incentive fee on income for the period January 1, 2015 to March 31, 2015, which our Sub-Adviser has agreed to waive). Our Adviser has no obligation to waive fees pursuant to the Conditional Fee Waiver Agreement after December 31, 2015, unless the fee waiver period is further extended.

Reimbursement of previously waived fees will only be permitted with the approval of the our board of directors and if our operating expense ratio is equal to or less than our operating expense ratio at the time the corresponding fees were waived and if the annualized rate of regular cash distributions to stockholders is equal to or greater than the annualized rate of the regular cash distributions at the time the corresponding fees were waived.

In a separate agreement between our Adviser and our Sub-Adviser dated April 15, 2015 and effective January 1, 2015, our Sub-Adviser agreed to conditionally reimburse our Adviser for fifty percent of the fees waived each quarter in 2015, up to \$200,000 in total waived fees per quarter. If the total amount conditionally reimbursed by our Sub-Adviser in 2015 is less than both (i) fifty percent of the fees waived by our Adviser for 2015 excluding any previously reimbursed amounts and (ii) \$400,000, then our Sub-Adviser shall reimburse our Adviser, in connection with the payment of management fees to our Sub-Adviser for the fourth quarter of 2015, the difference between (A) fifty percent of the fees waived by our Adviser for 2015 excluding any previously reimbursed amounts minus (B) any amounts conditionally reimbursed by our Sub-Adviser in 2015, up to a maximum of \$400,000 of total conditional reimbursements by our Sub-Adviser.

For the years ended December 31, 2014, 2013, and 2012, we incurred base management fees of approximately\$5.6 million, \$779,000 and \$232,000, respectively, and our Advisers waived base management fees of \$1.8 million, \$779,000 and \$232,000, respectively. Accordingly, net of waivers, we paid base management fees of approximately \$3.8 million for the year ended December 31, 2014, and no base management fees for either of the years ended December 31, 2013 and 2012. For theyears ended December 31, 2014, 2013, and 2012, we incurred capital gains incentive fees of approximately\$0, \$5,000 and \$3,000, respectively, and subordinated incentive fees on income of \$451,000, \$0 and \$123,000, respectively. For the years ended December 31, 2014, 2013 and 2012, our Advisers waived capital gains incentive fees of \$0, \$5,000 and \$3,000, respectively, and subordinated incentive fees on income of \$451,000, \$0 and \$123,000, respectively. During the years ended December 31, 2014, 2013 and 2012, we did not record an accrual for any previously waived fees. Any reimbursement of previously waived fees to our Advisers will not be accrued until the reimbursement of the waived fees become probable and estimable, which will be upon approval by our board of directors. To date none of the previously waived fees have been approved by the board of directors for reimbursement.

On November 11, 2013, we entered into an Expense Support and Conditional Reimbursement Agreement (the "2013 Expense Reimbursement Agreement") with the Adviser. Under the 2013 Expense Reimbursement Agreement, until December 31, 2013 or a prior date mutually agreed to by both parties, the Adviser will pay us up to 100% of our operating expenses (the "Expense Support Payment") in order to achieve a reasonable level of expenses relative to our investment income (the "Operating Expense Objective"). Operating expenses are defined as 2013 third party operating costs and expenses incurred by us under generally accepted accounting principles for investment management companies. The Board, in its sole discretion, may approve the repayment of unreimbursed Expense Support Payments (a "Reimbursement Payment") upon a determination by the Board that we have achieved the Operating Expense Objective in any quarter following receipt by us of an Expense Support Payment. Under the 2013 Expense Reimbursement Agreement, any unreimbursed Expense Support Payment may be reimbursed by us within a period not to exceed three years from the date each respective Expense Support Payment was determined. Any Expense Support Payments that remain unreimbursed three years after such payment will be permanently waived. Pursuant to the terms of the 2013 Expense Reimbursement Agreement, for the year ended December 31, 2013, the Adviser made an Expense Support Payment of \$153,000 to us. On April 15, 2015, we and our Adviser agreed to an amendment to the 2013 Expense Reimbursement Agreement, (the "2013 Expense Reimbursement Amendment"), in which reimbursement of an Expense Support Payment made under the 2013 Expense Reimbursement Agreement will be made in accordance with and subject to the Fee Waiver Amendment.

On December 30, 2013, we agreed to an Expense Support and Conditional Reimbursement Agreement with the Adviser, which was subsequently amended on March 31, 2014, June 30, 2014 and September 30, 2014 (as amended, the "2014 Expense Reimbursement Agreement"). Under the 2014 Expense Reimbursement Agreement, until December 31, 2014, or a prior date mutually agreed to by both parties, the Adviser, at its sole discretion, will pay to us up to 100% of our operating expenses (an "Expense Support Payment") in order to achieve a reasonable level of expenses relative to our investment income (the "Operating Expense Objective"). Operating expenses are defined as third party operating costs and expenses incurred by the Company between January 1, 2014, and December 31, 2014, under generally accepted accounting principles for investment management companies. The Board, in its sole discretion, may approve the repayment of unreimbursed Expense Support Payments (a "Reimbursement Payment") upon a determination by the Board that we have achieved the Operating Expense Objective in any quarter following

receipt by us of an Expense Support Payment. Under the 2014 Expense Reimbursement Agreement, any unreimbursed Expense Support Payment may be reimbursed by us within a period not to exceed three years from the date each respective Expense Support Payment was determined, but only after any Expense Support Payment amounts have been reimbursed under the 2013 Expense Reimbursement Agreement. Any Expense Support Payments that remain unreimbursed three years after such payment will be permanently waived. The 2014 Expense Reimbursement Agreement may be terminated by us at any time, and shall automatically terminate upon termination of the Advisory Agreement or upon our liquidation or dissolution.

During the year ended December 31, 2014, we received an Expense Support Payment of\$328,000, which the Adviser paid to us on October 30, 2014. The Expense Support Payment from the Adviser of \$328,000 may be reimbursed by us within a period not to exceed three years, subject to approval by our board of directors. As discussed above, the reimbursement of this Expense Support Payment from us to the Adviser is only permitted after the reimbursement of the Expense Support Payment of \$153,000 that was made in 2013. As of December 31, 2014, none of these amounts have been approved for reimbursement by the Board.

On April 15, 2015, we and our Adviser agreed to an amendment to the 2014 Expense Reimbursement Agreement, or "2014 Expense Reimbursement Amendment", in which reimbursement of an Expense Support Payment made under the 2014 Expense Reimbursement Agreement will be made in accordance with and subject to the Fee Waiver Amendment.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This supplement replaces the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations - Overview - Base Management Fee, Incentive Fee, Administrative Expense Waiver" on pages 48-49 of the Prospectus with the following:

On May 31, 2012, we and our Advisers entered into a conditional fee waiver agreement and subsequent amendments, pursuant to which, for a period from June 4, 2012 to December 31, 2013, our Advisers can waive all fees upon the occurrence of any event that, in our Advisers' sole discretion, is deemed necessary, including, but neither limited to nor automatically triggered by, our estimate that a distribution declared and payable to our stockholders during the fee waiver period represents, or would represent when paid, a return of capital for U.S. federal income tax purposes. We refer to this conditional fee waiver agreement, as amended from time to time, as the "Conditional Fee Waiver Agreement." Further, the agreement contains a clause which states that at the sole and absolute discretion of our board of directors, in future periods, previously waived fees may be paid to our Advisers if and only to the extent that our cumulative net increase in net assets resulting from operations exceeds the amount of cumulative distributions paid to stockholders. The previously waived fees are potentially subject to repayment by us, if at all, within a period not to exceed three years from the date of each respective fee waiver.

On December 30, 2013, we and our Advisers agreed to an amendment to the Conditional Fee Waiver Agreement which extended the term of the fee waiver through December 31, 2014. The terms of the fee waiver were not extended with respect to our Sub-Adviser, whose waiver expired on December 31, 2013 (except with respect to a subordinated incentive fee on income for the period October 1, 2014 to December 31, 2104, which the Sub-Adviser agreed to waive).

On April 15, 2015, we and our Advisers agreed to a further amendment (the "Fee Waiver Amendment") to the Conditional Fee Waiver Agreement. Under the Fee Waiver Amendment, our Advisers have agreed to extend the term of the fee waiver with respect to our Adviser through December 31, 2015. The terms of the fee waiver were not extended with respect to our Sub-Adviser (except for the subordinated incentive fee on income for the period January 1, 2015 to March 31, 2015, which our Sub-Adviser has agreed to waive). Our Adviser has no obligation to waive fees pursuant to the Conditional Fee Waiver Agreement after December 31, 2015, unless the fee waiver period is further extended.

Reimbursement of previously waived fees will only be permitted with the approval of the our board of directors and if the operating expense ratio is equal to or less than our operating expense ratio at the time the corresponding fees were waived and if the annualized rate of regular cash distributions to stockholders is equal to or greater than the annualized rate of the regular cash distributions at the time the corresponding fees were waived.

In a separate agreement between our Adviser and our Sub-Adviser dated April 15, 2015 and effective January 1, 2015, our Sub-Adviser agreed to conditionally reimburse our Adviser for fifty percent of the fees waived each quarter in 2015, up to \$200,000 in total waived fees per quarter. If the total amount conditionally reimbursed by our Sub-Adviser in 2015 is less than both (i) fifty percent of the fees waived by our Adviser for 2015 excluding any previously reimbursed amounts and (ii) \$400,000, then our Sub-Adviser shall reimburse our Adviser, in connection with the payment of management fees to our Sub-Adviser for the fourth quarter of 2015, the difference between (A) fifty percent of the fees waived by our Adviser for 2015 excluding any previously reimbursed

amounts minus (B) any amounts conditionally reimbursed by our Sub-Adviser in 2015, up to a maximum of \$400,000 of total conditional reimbursements by our Sub-Adviser.

For the years ended December 31, 2014, 2013, and 2012, we incurred base management fees of approximately\$5.6 million, \$779,000 and \$232,000, respectively, and our Advisers waived base management fees of \$1.8 million, \$779,000 and \$232,000, respectively. Accordingly, net of waivers, we paid base management fees of approximately \$3.8 million for the year ended December 31, 2014, and no base management fees for either of the years ended December 31, 2013 and 2012. For theyears ended December 31, 2014, 2013, and 2012, we incurred capital gains incentive fees of approximately\$0, \$5,000 and \$3,000, respectively, and subordinated incentive fees on income of \$451,000, \$0 and \$123,000, respectively. For the years ended December 31, 2014, 2013 and 2012, the Advisers waived capital gains incentive fees of \$0, \$5,000 and \$3,000, respectively, and subordinated incentive fees on income of \$451,000, \$0 and \$123,000, respectively. During the years ended December 31, 2014, 2013 and 2012, we did not record an accrual for any previously waived fees. Any reimbursement of previously waived fees to the Advisers will not be accrued until the reimbursement of the waived fees become probable and estimable, which will be upon approval by our board of directors. To date none of the previously waived fees have been approved by the board of directors for reimbursement.

Pursuant to the Advisory Agreement and Sub-Advisory Agreement, we are required to pay or reimburse the Advisers for administrative services expenses, which include all costs and expenses related to the day-to-day administration and management of the Company not related to advisory services. For the years ended December 31, 2014, 2013 and 2012, we incurred, and the Advisers waived the reimbursement of, administrative services expenses of approximately \$1.5 million, \$1.0 million and \$438,000, respectively. The waiver of the reimbursement of administrative service expenses is not subject to future reimbursement.

On November 11, 2013, we entered into an Expense Support and Conditional Reimbursement Agreement (the "2013 Expense Reimbursement Agreement") with the Adviser. Under the 2013 Expense Reimbursement Agreement, until December 31, 2013 or a prior date mutually agreed to by both parties, the Adviser will pay us up to 100% of our operating expenses (the "Expense Support Payment") in order to achieve a reasonable level of expenses relative to our investment income (the "Operating Expense Objective"). Operating expenses are defined as 2013 third party operating costs and expenses incurred by us under generally accepted accounting principles for investment management companies. The Board, in its sole discretion, may approve the repayment of unreimbursed Expense Support Payments (a "Reimbursement Payment") upon a determination by the Board that we have achieved the Operating Expense Objective in any quarter following receipt by us of an Expense Support Payment. Under the 2013 Expense Reimbursement Agreement, any unreimbursed Expense Support Payment may be reimbursed by us within a period not to exceed three years from the date each respective Expense Support Payment was determined. Any Expense Support Payments that remain unreimbursed three years after such payment will be permanently waived. Pursuant to the terms of the 2013 Expense Reimbursement Agreement, for the year ended December 31, 2013, the Adviser made an Expense Support Payment of \$153,000 to us. On April 15, 2015, we and our Adviser agreed to an amendment to the 2013 Expense Reimbursement Agreement, and subject to the Fee Waiver Amendment.

On December 30, 2013, we agreed to an Expense Support and Conditional Reimbursement Agreement with the Adviser, which was subsequently amended on March 31, 2014 and June 30, 2014 (as amended, the "2014 Expense Reimbursement Agreement"). Under the 2014 Expense Reimbursement Agreement, until December 31, 2014, or a prior date mutually agreed to by both parties, the Adviser, at its sole discretion, will pay to us up to 100% of our operating expenses (an "Expense Support Payment") in order to achieve a reasonable level of expenses relative to our investment income (the "Operating Expense Objective"). Operating expenses are defined as third party operating costs and expenses incurred by the Company between January 1, 2014, and December 31, 2014, under generally accepted accounting principles for investment management companies. The Board, in its sole discretion, may approve the repayment of unreimbursed Expense Support Payments (a "Reimbursement Payment") upon a determination by the Board that we have achieved the Operating Expense Objective in any quarter following receipt by us of an Expense Support Payment. Under the 2014 Expense Reimbursement Agreement, any unreimbursed Expense Support Payment may be reimbursed by us within a period not to exceed three years from the date each respective Expense Support Payment was determined, but only after any Expense Support Payment amounts have been reimbursed under the 2013 Expense Reimbursement Agreement Any Expense Support Payments that remain unreimbursed three years after such payment will be permanently waived. The 2014 Expense Reimbursement Agreement may be terminated by us at any time, and shall automatically terminate upon termination of the Advisory Agreement or upon our liquidation or dissolution.

During the year ended December 31, 2014, we received an Expense Support Payment of\$328,000, which the Adviser paid to us on October 30, 2014. The Expense Support Payment from the Adviser of \$328,000 may be reimbursed by us within a period not to exceed three years, subject to approval by our board of directors. As discussed above, the reimbursement of this Expense Support Payment from us to the Adviser is only permitted after the reimbursement of the Expense Support Payment of \$153,000 that was made in 2013. As of December 31, 2014, none of these amounts have been approved for reimbursement by the Board. On April 15, 2015, we and our Adviser agreed to an amendment to the 2014 Expense Reimbursement Agreement, or "2014 Expense"

Reimbursement Amendment", in which reimbursement of an Expense Support Payment made under the 2014 Expense Reimbursement Agreement will be made in accordance with and subject to the Fee Waiver Amendment.

This supplement updates the Prospectus to include this information where appropriate throughout the Prospectus, including on pages 92 and 96 of the Prospectus.