

MidWestOne Financial Group, Inc.
Form 424B3
November 30, 2018

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**Filed Pursuant to Rule 424(b)(3)
Registration No. 333-227899**

Dear Shareholders of MidWestOne Financial Group, Inc. and ATBancorp:

We are pleased to report that the boards of directors of MidWestOne Financial Group, Inc., referred to as MidWestOne, and ATBancorp, together referred to as the parties, have approved a strategic merger involving our two companies (the "Merger"). We cannot complete the combination without your approval. If the Merger proposals described in this document are approved by the shareholders of each party and the Merger is subsequently completed, ATBancorp will merge with and into MidWestOne, with MidWestOne as the surviving entity.

Pursuant to the terms of an Agreement and Plan of Merger dated August 21, 2018 (the "Merger Agreement"), each share of ATBancorp common stock issued and outstanding immediately prior to the effective time of the Merger (the "Effective Time"), excluding any Cancelled Shares and any Dissenters' Shares (each as defined in the Merger Agreement), shall represent the right to receive (i) 117.5500 fully paid and nonassessable shares of MidWestOne common stock (the "Per Share Stock Consideration") and (ii) \$992.51 (the "Per Share Cash Consideration").

MidWestOne expects to issue approximately 4,117,541 shares of its common stock upon completion of the Merger. MidWestOne's common stock is traded on the NASDAQ Global Select Market under the symbol "MOFG." As reported on the NASDAQ Global Select Market, MidWestOne's common stock closed at \$33.25 on August 21, 2018, the day before the announcement of the Merger, and at \$28.98 on November 26, 2018, the last practicable trading day before the date of this joint proxy statement/prospectus. Based on these closing prices, the transaction value is estimated at \$171.67 million, or \$4,901.05 per share of ATBancorp common stock, or \$154.09 million, or \$4,399.11 per share of ATBancorp common stock, respectively. Based on a Final Acquiror Market Value (as defined below) of MidWestOne's common stock of \$26.60 (the price beneath which ATBancorp would have the right to terminate the Merger Agreement, as described below, subject to the other conditions therein, including MidWestOne's right to increase the amount of consideration payable to ATBancorp shareholders), the transaction value is estimated at \$144.29 million, or \$4,119.34 per share of ATBancorp common stock. The ultimate value of the consideration received by ATBancorp shareholders will depend on the trading value of MidWestOne common stock prior to the closing of the Merger.

ATBancorp has the right to terminate the Merger Agreement upon a significant decrease in the price of MidWestOne's common stock. In particular, ATBancorp may terminate the Merger Agreement if, as of the first date on which all requisite regulatory approvals (and waivers, if applicable) necessary for consummation of the Merger have been received (disregarding any waiting period) (the "Determination Date"): (i) the weighted average of the daily closing sales prices of a share of MidWestOne's common stock as reported on the Nasdaq Global Select Market for the 20 consecutive trading days immediately preceding the Determination Date (the "Final Acquiror Market Value") is less than \$26.60; and (ii) the number obtained by dividing the Final Acquiror Market Value by \$33.25 is less than the quotient of (x) the average of the daily closing value of the NASDAQ Bank Index for the 20 consecutive trading days immediately preceding the Determination Date, and (y) \$4,315.63 (such quotient, the "Index Ratio"), multiplied by 0.80. If ATBancorp provides notice of such termination to MidWestOne, MidWestOne may elect to increase the Per Share Stock Consideration to equal the lesser of (1) a quotient, the numerator of which is equal to the product of (A) \$33.25; (B) the Per Share Stock Consideration; and (C) the Index Ratio multiplied by 0.80, and the denominator of which is equal to the Final Acquiror Market Value; or (2) the quotient determined by dividing the \$33.25 by the Final Acquiror Market Value, and multiplying the quotient by the product of the Per Share Stock Consideration and 0.80.

The effect of ATBancorp's termination right and MidWestOne's right to increase consideration is to ensure that the total consideration paid to ATBancorp shareholders is at least \$144.29 million.

The Merger is intended to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended, (the "Internal Revenue Code"). Assuming the Merger qualifies as a reorganization, a shareholder of ATBancorp generally will not recognize any gain or loss upon receipt of MidWestOne common stock in exchange for ATBancorp common stock in the Merger, and will recognize gain (but not loss) in an amount not to exceed any cash received as part of the Merger consideration (except with respect to any cash received in lieu of a fractional share of MidWestOne common stock, as discussed below under "Material U.S. Federal Income Tax Consequences of the Merger - Cash Received In Lieu of a Fractional Share of MidWestOne Common Stock").

MidWestOne and ATBancorp will each hold a special meeting of shareholders to consider certain matters relating to the proposed Merger. MidWestOne and ATBancorp cannot complete the proposed Merger unless: (1) MidWestOne's shareholders vote to approve and adopt the Merger Agreement and the transactions contemplated thereby and approve the issuance of MidWestOne common stock in connection with the Merger, and (2) ATBancorp's shareholders vote to approve and adopt the Merger Agreement and the transactions contemplated thereby. The parties' respective boards of directors are providing this document to

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solicit your proxy to vote for approval of the parties' respective proposals.

This document is also being delivered to ATBancorp shareholders as MidWestOne's prospectus for its offering of MidWestOne common stock in connection with the Merger.

ATBancorp shareholders will have the right to demand appraisal of their shares of ATBancorp common stock and obtain payment in cash for the fair value of their shares, but only if they perfect their appraisal rights and comply with the applicable provisions of Iowa law. For more information regarding dissenters' rights, please see "Questions and Answers About the Merger and the Special Meetings Are ATBancorp Shareholders Entitled to Appraisal Rights?" on page 9 and "The Merger ATBancorp Shareholder Appraisal Rights" beginning on page 109.

Your vote is very important. To ensure your representation at the MidWestOne or ATBancorp special meeting, as applicable, please complete and return the enclosed proxy card or submit your proxy by one of the other means described below. Whether or not you expect to attend the MidWestOne or ATBancorp special meeting, as applicable, please vote promptly. Submitting a proxy now will not prevent you from being able to vote in person at the applicable special meeting. Each of the MidWestOne and ATBancorp boards of directors has approved the Merger Agreement and the transactions contemplated thereby and recommends to its shareholders to vote "FOR" adoption or approval of their respective proposals.

This document provides you with detailed information about the proposed Merger. It also contains or references information about MidWestOne and ATBancorp and certain related matters. You are encouraged to read this document carefully. **In particular, you should read the "Risk Factors" section beginning on page 44 for a discussion of the risks you should consider in evaluating the proposed Merger and how it will affect you.**

Sincerely,

Charles N. Funk
*President and Chief Executive Officer of
MidWestOne Financial Group, Inc.*

Nicholas J. Schrup, III
*Chairman and President of
ATBancorp*

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the Merger, the issuance of MidWestOne common stock in connection with the Merger or the other transactions described in this document, or passed upon the adequacy or accuracy of the disclosure in this document. Any representation to the contrary is a criminal offense.

The securities to be issued in connection with the Merger are not savings accounts, deposits or other obligations of any bank, non-bank subsidiary or savings association and are not insured by the Federal Deposit Insurance Corporation or any other governmental agency. The securities are subject to investment risk, including possible loss of principal.

This document is dated November 30, 2018 and is first being mailed to shareholders of MidWestOne and ATBancorp on or about December 5, 2018.

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WHERE YOU CAN FIND MORE INFORMATION

MidWestOne files annual, quarterly and special reports, proxy statements and other business and financial information with the Securities and Exchange Commission (the "SEC"). You may read and copy any materials that MidWestOne files with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549, at prescribed rates. Please call the SEC at (800) SEC-0330 for further information on the public reference room. In addition, MidWestOne files reports and other business and financial information with the SEC electronically, and the SEC maintains a website located at <http://www.sec.gov> containing this information. You will also be able to obtain these documents, free of charge, from MidWestOne at www.midwestone.com under the "About MidWestOne Financial Group," and the "SEC Filings" links.

MidWestOne has filed a registration statement on Form S-4 of which this document forms a part. As permitted by SEC rules, this document does not contain all of the information included in the registration statement or in the exhibits or schedules to the registration statement. You may read and copy the registration statement, including any amendments, schedules and exhibits, at the addresses set forth below. Statements contained in this document as to the contents of any contract or other documents referred to in this document are not necessarily complete. In each case, you should refer to the copy of the applicable contract or other document filed as an exhibit to the registration statement. This document incorporates by reference documents that MidWestOne has previously filed with the SEC. They contain important information about the company and its financial condition. For further information, please see the section entitled "Incorporation of Certain Documents by Reference" beginning on page 189. These documents are available without charge at its principal executive office, at the following address and telephone number:

MidWestOne Financial Group, Inc.
102 South Clinton Street
Iowa City, Iowa 52240
Attn: Kenneth R. Urmie, Corporate Secretary
(319) 356-5800

To obtain timely delivery of these documents, you must request the information no later than five business days before the date of the MidWestOne special meeting of shareholders in order to receive them before MidWestOne's special meeting and no later than five business days before the date of the ATBancorp special meeting of shareholders in order to receive them before ATBancorp's special meeting.

In addition, if you have questions about the Merger or the ATBancorp special meeting, need additional copies of this joint proxy statement/prospectus or need to obtain proxy cards or other information related to the proxy solicitation, you may contact ATBancorp at its principal executive office, at the following address and telephone number:

ATBancorp
895 Main Street
Dubuque, Iowa 52001
Attention: John W. Marshall, Secretary
(563) 589-7178

ATBancorp does not have a class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is not subject to the reporting requirements of Section 13(a) or 15(d) of the Exchange Act, and accordingly does not file documents or reports with the SEC.

You should rely only on the information contained or incorporated by reference in this joint proxy statement/prospectus. No one has been authorized to provide you with information that is different from what is contained in this joint proxy statement/prospectus. You should not assume that the information contained in this joint proxy statement/prospectus is accurate as of any date other than the date of this joint proxy statement/prospectus, and neither the mailing of this joint proxy

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statement/prospectus to MidWestOne and ATBancorp shareholders nor the issuance of MidWestOne common stock in the Merger shall create any implication to the contrary.

Information on the websites of MidWestOne or ATBancorp, or any subsidiary of MidWestOne or ATBancorp, is not part of this document or incorporated by reference herein. You should not rely on that information in deciding how to vote.

This document does not constitute an offer to sell, or a solicitation of an offer to buy, any securities, or the solicitation of a proxy, in any jurisdiction to or from any person to whom it is unlawful to make any such offer or solicitation in such jurisdiction. Except where the context otherwise indicates, information contained in this document regarding MidWestOne has been provided by MidWestOne and information contained in this document regarding ATBancorp has been provided by ATBancorp.

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**102 South Clinton St.
Iowa City, Iowa 52240
(319) 356-5800**

**NOTICE OF THE SPECIAL MEETING OF SHAREHOLDERS
TO BE HELD ON JANUARY 11, 2019**

NOTICE IS HEREBY GIVEN that a special meeting of the shareholders of MidWestOne Financial Group, Inc. ("MidWestOne"), will be held at 102 South Clinton Street, Summerwill Conference Room, Iowa City, IA 52240, at 10:00 a.m., Central Time, on Friday, January 11, 2019 for the following purposes:

1. Approval and adoption of the Agreement and Plan of Merger, dated as of August 21, 2018, by and between MidWestOne Financial Group, Inc., or MidWestOne, and ATBancorp, as such agreement may be amended from time to time (the "Merger Agreement"), and the transactions contemplated thereby (the "MidWestOne merger proposal");
2. Approval of the issuance of MidWestOne common stock in the Merger (the "MidWestOne stock issuance proposal"); and
3. Approval of one or more adjournments of the MidWestOne special meeting, if necessary or appropriate, including adjournments to permit further solicitation of proxies in favor of the MidWestOne merger proposal and the MidWestOne stock issuance proposal (the "MidWestOne adjournment proposal").

MidWestOne will transact no other business at the special meeting, except for business properly brought before the special meeting or any adjournment or postponement thereof.

The above proposals are described in more detail in this document, which you should read carefully in its entirety before you vote. A copy of the Merger Agreement is attached as *Appendix A* to this document.

The MidWestOne board of directors has set November 26, 2018 as the record date for the MidWestOne special meeting. Only holders of record of MidWestOne common stock at the close of business on November 26, 2018 will be entitled to notice of and to vote at the MidWestOne special meeting and any adjournments or postponements thereof. Any shareholder entitled to attend and vote at the MidWestOne special meeting is entitled to appoint a proxy to attend and vote on such shareholder's behalf. Such proxy need not be a holder of MidWestOne common stock.

Your vote is very important. To ensure your representation at the MidWestOne special meeting, please complete and return the enclosed proxy card or submit your proxy by telephone, through the Internet or by mail. Please vote promptly whether or not you expect to attend the MidWestOne special meeting. Submitting a proxy now will not prevent you from being able to vote in person at the MidWestOne special meeting.

The MidWestOne board of directors has approved the Merger Agreement and the transactions contemplated thereby and recommends that you vote "FOR" the MidWestOne merger proposal, "FOR" the MidWestOne stock issuance proposal and "FOR" the MidWestOne adjournment proposal (if necessary or appropriate).

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BY ORDER OF THE BOARD OF DIRECTORS

Charles N. Funk
*President and Chief Executive Officer of
MidWestOne Financial Group, Inc.*

Iowa City, Iowa
November 30, 2018

PLEASE VOTE YOUR SHARES OF MIDWESTONE COMMON STOCK PROMPTLY. YOU CAN FIND INSTRUCTIONS FOR VOTING ON THE ENCLOSED PROXY CARD. IF YOU HAVE QUESTIONS ABOUT THE PROPOSALS OR ABOUT VOTING YOUR SHARES, PLEASE CALL MIDWESTONE INVESTOR RELATIONS AT (319) 356-5800.

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**ATBANCORP
895 MAIN STREET
DUBUQUE, IOWA 52001
(563) 582-1841**

**NOTICE OF THE SPECIAL MEETING OF SHAREHOLDERS
TO BE HELD ON JANUARY 10, 2019**

To the holders of ATBancorp common stock:

NOTICE IS HEREBY GIVEN that a special meeting of the shareholders of ATBancorp will be held at American Trust & Savings Bank, 895 Main Street, Dubuque, Iowa 52001, at 11:00 a.m., Central Time, on Thursday, January 10, 2019 for the following purposes:

1. Approval and adoption of the Agreement and Plan of Merger, dated as of August 21, 2018, by and between MidWestOne Financial Group, Inc. and ATBancorp, as such agreement may be amended from time to time (the "Merger Agreement"), and the transactions contemplated thereby (the "ATBancorp merger proposal"); and
2. Approval of one or more adjournments of the ATBancorp special meeting, if necessary or appropriate, including adjournments to permit further solicitation of proxies in favor of the ATBancorp merger proposal (the "ATBancorp adjournment proposal").

ATBancorp will transact no other business at the special meeting, except for business properly brought before the special meeting or any adjournment or postponement thereof.

The above proposals are described in more detail in this document, which you should read carefully in its entirety before you vote. A copy of the Merger Agreement is attached as *Appendix A* to this document.

The ATBancorp board of directors has set November 15, 2018 as the record date for the ATBancorp special meeting. Only holders of record of ATBancorp common stock at the close of business on November 15, 2018 will be entitled to notice of and to vote at the ATBancorp special meeting and any adjournments or postponements thereof. Any shareholder entitled to attend and vote at the ATBancorp special meeting is entitled to appoint a proxy to attend and vote on such shareholder's behalf. Such proxy need not be a holder of ATBancorp common stock.

Your vote is very important. To ensure your representation at the ATBancorp special meeting, please complete and return the enclosed proxy card. Please vote promptly whether or not you expect to attend the ATBancorp special meeting. Submitting a proxy now will not prevent you from being able to vote in person at the ATBancorp special meeting.

The ATBancorp board of directors has approved the Merger Agreement and the transactions contemplated thereby and recommends that you vote "FOR" the ATBancorp merger proposal and "FOR" the ATBancorp adjournment proposal (if necessary or appropriate).

BY ORDER OF THE BOARD OF DIRECTORS

Nicholas J. Schrup, III
Chairman and President of ATBancorp

Dubuque, Iowa
November 30, 2018

PLEASE VOTE YOUR SHARES OF ATBANCORP COMMON STOCK PROMPTLY. YOU CAN FIND INSTRUCTIONS FOR VOTING ON THE ENCLOSED PROXY CARD. IF YOU HAVE QUESTIONS ABOUT THE PROPOSALS OR ABOUT VOTING YOUR SHARES, PLEASE CALL JOHN W. MARSHALL, SECRETARY, AT (563) 589-7178.

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QUESTIONS AND ANSWERS ABOUT THE MERGER AND THE SPECIAL MEETINGS

The following are answers to certain questions that you may have regarding the special meetings. The parties urge you to read carefully the remainder of this document because the information in this section may not provide all the information that might be important to you in determining how to vote. Additional important information is also contained in the appendices to, and the documents incorporated by reference in, this document.

Q: WHAT IS THE MERGER?

A. MidWestOne and ATBancorp have entered into a Merger Agreement pursuant to which, subject to the terms and conditions of the Merger Agreement, ATBancorp will merge with and into MidWestOne, with MidWestOne continuing as the surviving corporation (the "Merger"). A copy of the Merger Agreement is attached as *Appendix A* to this document. Immediately following the Merger, each of American Trust & Savings Bank ("ATSB"), an Iowa state chartered bank, and American Bank & Trust Wisconsin ("ABTW"), a Wisconsin state chartered bank, each of which is a wholly-owned subsidiary of ATBancorp, will merge with and into MidWestOne Bank, an Iowa state chartered bank and a wholly owned subsidiary of MidWestOne ("MidWestOne Bank"), with MidWestOne Bank continuing as the surviving bank (the "Bank Mergers"). In order to complete the transaction, each party needs not only the approval of its respective shareholders but the approval of each of these mergers by the applicable banking regulators of MidWestOne, MidWestOne Bank, ATBancorp, ATSB and ABTW.

Q: WHY AM I RECEIVING THIS JOINT PROXY STATEMENT/PROSPECTUS?

A. Each of MidWestOne and ATBancorp is sending these materials to its shareholders to help them decide how to vote their shares of MidWestOne or ATBancorp common stock, as the case may be, with respect to the matters to be considered at the special meetings.

The Merger cannot be completed unless MidWestOne shareholders approve and adopt the Merger Agreement and the transactions contemplated thereby and approve the issuance of MidWestOne common stock in the Merger, and ATBancorp shareholders approve and adopt the Merger Agreement and the transactions contemplated thereby. Each of MidWestOne and ATBancorp is holding a special meeting of its shareholders to vote on the proposals necessary to complete the Merger. Information about these special meetings, the Merger and the business to be considered by shareholders at each of the special meetings is contained in this document.

This document constitutes both a joint proxy statement of MidWestOne and ATBancorp and a prospectus of MidWestOne. It is a joint proxy statement because each of the boards of directors of MidWestOne and ATBancorp is soliciting proxies using this document from their respective shareholders. It is a prospectus because MidWestOne, in connection with the Merger, is offering shares of its common stock in exchange for outstanding shares of ATBancorp common stock.

Q: WHAT WILL ATBANCORP SHAREHOLDERS RECEIVE IN THE MERGER?

A: Each share of ATBancorp common stock issued and outstanding immediately prior to the effective time of the Merger ("Effective Time"), excluding any Cancelled Shares and any Dissenters' Shares (each as defined in the Merger Agreement), shall represent the right to receive (i) the Per Share Stock Consideration and (ii) the Per Share Cash Consideration.

For each fractional share that would otherwise be issued, MidWestOne will pay cash in an amount equal to such fraction multiplied by the volume weighted average of the daily closing sales prices of a share of MidWestOne's common stock as reported on the Nasdaq Global Select Market for the 20 consecutive trading days immediately preceding the Closing Date (the "Closing Acquiror

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Common Stock Price"). The "Closing Date" will be the first day of the month immediately following the month in which the satisfaction or waiver of the latest to occur of MidWestOne's and ATBancorp's respective closing conditions occurs, or at such other time and place as MidWestOne and ATBancorp may agree. No interest will be paid or accrue on cash payable to holders in lieu of fractional shares.

Based on MidWestOne's common stock's closing price of \$33.25 on August 21, 2018, the day before the announcement of the Merger, the transaction value is estimated at \$171.67 million, or \$4,901.05 per share of ATBancorp common stock. Based on MidWestOne's common stock's closing price of \$28.98 on November 26, 2018, the transaction value is estimated at \$154.09 million, or \$4,399.11 per share of ATBancorp common stock. Based on a Final Acquiror Market Value of MidWestOne's closing stock of \$26.60 (the price beneath which ATBancorp would have the right to terminate the Merger Agreement, subject to the other conditions therein, including MidWestOne's right to increase the amount of consideration payable to ATBancorp shareholders), the transaction value is estimated at \$144.29 million, or \$4,119.34 per share of ATBancorp common stock.

The ultimate value of the consideration received by ATBancorp shareholders will depend on the trading value of MidWestOne common stock prior to the closing of the Merger.

Q: WILL THE VALUE OF THE MERGER CONSIDERATION CHANGE BETWEEN THE DATE OF THIS DOCUMENT AND THE TIME THE MERGER IS COMPLETED?

A: Yes. The trading price of MidWestOne common stock may increase or decrease prior to the Closing Date, and the value of the shares of MidWestOne common stock that you would receive in connection with the Merger would increase or decrease accordingly. In addition, the number of shares of MidWestOne common stock that you may receive in the Merger may be increased in certain circumstances pursuant to the terms of the Merger Agreement. See "The Merger Agreement Termination of the Merger Agreement."

Q: WILL ATBANCORP SHAREHOLDERS BE ABLE TO TRADE THE SHARES OF MIDWESTONE COMMON STOCK RECEIVED IN THE MERGER?

A: Yes. The MidWestOne common stock issued in the Merger to ATBancorp shareholders, except for holders of any Dissenters' Shares, will be registered under the Securities Act of 1933, as amended (the "Securities Act"), and will be listed on NASDAQ under the symbol "MOFG." All shares of MidWestOne common stock issued in the Merger will be freely transferable and will not be subject to any restrictions on transfer arising under the Securities Act, except for (i) shares issued to any ATBancorp shareholder who may be deemed to be an "affiliate" of MidWestOne after completion of the Merger, or (ii) shares subject to a Lock-Up Agreement described below. An affiliate of a corporation, as defined by the rules promulgated under the Securities Act, is a person who directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, that corporation. Affiliates generally include directors, executive officers and beneficial owners of 10% or more of a corporation's capital stock.

In connection with entering into the Merger Agreement, MidWestOne entered into Lock-Up Agreements ("Lock-Up Agreements") with certain holders of ATBancorp common stock. The shareholders that are party to the Lock-Up Agreements beneficially own in the aggregate 62.41% of the outstanding shares of ATBancorp common stock. The Lock-Up Agreements require that the shareholders that are parties thereto, during the period commencing as of the date on which the Effective Time occurs and expiring 180 days thereafter, not directly or indirectly, with certain exceptions, take any action to: (i) offer, sell, contract to sell, sell any option, warrant or contract to purchase, purchase any option, warrant or contract to sell, transfer, pledge or otherwise dispose of, or enter into any transaction which is designed to, or might reasonably be expected to, result in the

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disposition (whether by actual disposition or effective economic disposition or otherwise) of any shares of *MidWestOne* common stock whether owned as of the time of the Lock-Up Agreements or subsequently acquired, including shares of *MidWestOne* common stock received by the shareholder pursuant to the Merger Agreement; (ii) enter into any swap or other derivative transaction that transfers to another, in whole or in part, any of the economic benefits or risks of ownership of *MidWestOne* common stock, whether any such transaction is to be settled by delivery of *MidWestOne* common stock or other securities, in cash or otherwise; or (iii) publicly disclose an intention to effect any transaction contemplated by clause (i) or (ii). If the Merger Agreement is terminated without the consummation of the Merger, the Lock-Up Agreements will automatically terminate.

Former ATBancorp shareholders who are not affiliates of *MidWestOne* after the completion of the Merger and are not subject to the terms of a Lock-Up Agreement may sell their shares of *MidWestOne* common stock received in the Merger at any time. Former ATBancorp shareholders who become affiliates of *MidWestOne* after completion of the Merger and are not subject to the terms of a Lock-Up Agreement will be subject to the volume and sale limitations of Rule 144 under the Securities Act until they are no longer affiliates of *MidWestOne*. This joint proxy statement/prospectus does not cover resales of *MidWestOne* common stock received by any person upon completion of the Merger, and no person is authorized to make any use of or rely on this joint proxy statement/prospectus in connection with or to effect any resale of *MidWestOne* common stock.

Q: WHAT ARE THE SPECIAL DIVIDENDS?

A: The Merger Agreement provides that ATBancorp may pay a special dividend of \$907.8452 per share to the ATBancorp shareholders at any time prior to the closing of the Merger (the "Closing") as determined by ATBancorp. Such dividend represents a portion of the proceeds to ATBancorp from the sale of Heritage Commerce Corp common stock received as consideration in connection with the sale of United American Bank. The special dividend was distributed to ATBancorp shareholders on September 24, 2018.

The Merger Agreement also provides that ATBancorp may pay a special dividend to shareholders based on the net proceeds (if any) received by ATBancorp in connection with the disposition by ATBancorp of certain of its businesses American Trust Retirement, ATBancorp's California trust office, and ATInsurance as well as 100% of the equity of ATCapital Management, a registered investment advisor and a wholly owned subsidiary of ATBancorp (collectively, the "ATB Businesses"), prior to Closing, as required by the Merger Agreement. The payment of these special dividends by ATBancorp is in addition to the Merger consideration to be paid by *MidWestOne*. ATBancorp shareholders are not required to take any action to approve or receive these special dividends.

As required by the Merger Agreement, ATBancorp is currently in the process of negotiating with third parties the sale of the ATB Businesses. One purchaser would purchase the assets derived out of ATBancorp's California trust office and the other purchaser would purchase the rest of the assets, which make up a bulk of the ATB Businesses. As of the date of this joint proxy statement/prospectus, ATBancorp has not entered into a definitive agreement with the potential purchasers. As a result, it is not known when any such sale may close or whether ATBancorp will ultimately sell the ATB Businesses to the potential purchasers with whom it is in negotiations. It is also likely that any such sales will require the establishment of escrow accounts with the proceeds from the sales of the ATB Businesses. The establishment of any escrows will likely delay the time of a full distribution of the net proceeds from the sale of the ATB Businesses and any claims against the escrow accounts could materially decrease the amount of consideration payable to ATBancorp shareholders that they would have otherwise been entitled to through a special dividend.

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Q: WHEN WILL THE MERGER BE COMPLETED?

A: MidWestOne and ATBancorp are working to complete the Merger as soon as practicable. The Merger will occur on the first day of the month immediately following the month in which the satisfaction or waiver of the latest to occur of the closing conditions set forth in the Merger Agreement or at such other time and place as MidWestOne and ATBancorp may agree. Neither MidWestOne nor ATBancorp can predict the actual date on which the Merger will be completed because it is subject to factors beyond each company's control, including whether or when the parties' respective shareholders' approvals will be received. For further information, please see the section entitled "The Merger Agreement Conditions to Consummation of the Merger" beginning on page 124.

Q: WHO IS ENTITLED TO VOTE?

A: *MidWestOne Special Meeting.* Holders of record of MidWestOne common stock at the close of business on November 26, 2018, which is the date that the MidWestOne board of directors has fixed as the record date for the MidWestOne special meeting, are entitled to vote at the MidWestOne special meeting.

ATBancorp Special Meeting. Holders of record of ATBancorp common stock at the close of business on November 15, 2018, which is the date that the ATBancorp board of directors has fixed as the record date for the ATBancorp special meeting, are entitled to vote at the ATBancorp special meeting.

Q: WHAT CONSTITUTES A QUORUM?

A: *MidWestOne Special Meeting.* A majority of the outstanding shares of MidWestOne entitled to vote, represented in person or by proxy, will constitute a quorum for the transaction of business at the MidWestOne special meeting. Abstentions and broker non-votes, if any, will be included in determining the number of shares present at the meeting for the purpose of determining the presence of a quorum.

ATBancorp Special Meeting. A majority of the outstanding shares of ATBancorp entitled to vote, represented in person or by proxy, will constitute a quorum for the transaction of business at the ATBancorp special meeting. Abstentions will be included in determining the number of shares present at the meeting for the purpose of determining the presence of a quorum.

Q: WHAT AM I BEING ASKED TO VOTE ON AND WHY IS THIS APPROVAL NECESSARY?

A: *MidWestOne Special Meeting.* MidWestOne shareholders are being asked to vote on the following proposals:

1. To approve the MidWestOne merger proposal.
2. To approve the MidWestOne stock issuance proposal.
3. To approve the MidWestOne adjournment proposal (if necessary or appropriate).

Shareholder approval of the MidWestOne merger proposal and the MidWestOne stock issuance proposal is required to complete the Merger. MidWestOne will transact no business other than as listed above at the MidWestOne special meeting, except for business properly brought before the MidWestOne special meeting or any adjournment or postponement thereof.

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ATBancorp Special Meeting. ATBancorp shareholders are being asked to vote on the following proposals:

1. To approve the ATBancorp merger proposal.
2. To approve the ATBancorp adjournment proposal (if necessary or appropriate).

Shareholder approval of the ATBancorp merger proposal is required to complete the Merger. ATBancorp will transact no business other than as listed above at the ATBancorp special meeting, except for business properly brought before the ATBancorp special meeting or any adjournment or postponement thereof.

Q: WHAT VOTE IS REQUIRED TO APPROVE EACH PROPOSAL AT THE MIDWESTONE SPECIAL MEETING?

A: *The MidWestOne merger proposal:* The affirmative vote of a majority of the votes entitled to be cast on the proposal is required to approve the MidWestOne merger proposal.

The MidWestOne stock issuance proposal: The affirmative vote of a majority of the shares of MidWestOne common stock represented in person or by proxy at the MidWestOne special meeting and entitled to vote on the proposal is required to approve the MidWestOne stock issuance proposal.

The MidWestOne adjournment proposal: The affirmative vote of a majority of the shares of MidWestOne common stock represented in person or by proxy at the MidWestOne special meeting and entitled to vote on the proposal is required to approve the MidWestOne adjournment proposal.

Q: WHAT DOES THE MIDWESTONE BOARD OF DIRECTORS RECOMMEND?

A: The MidWestOne board of directors recommends that MidWestOne shareholders vote "FOR" the MidWestOne merger proposal, "FOR" the MidWestOne stock issuance proposal and "FOR" the MidWestOne adjournment proposal (if necessary or appropriate).

Q: WHAT VOTE IS REQUIRED TO APPROVE EACH PROPOSAL AT THE ATBANCORP SPECIAL MEETING?

A: *The ATBancorp merger proposal:* The affirmative vote of a majority of the shares of ATBancorp common stock represented in person or by proxy at the ATBancorp special meeting and entitled to vote on the proposal is required to approve the ATBancorp merger proposal. Pursuant to the Voting Agreement (as defined below), approval of the ATBancorp merger proposal is virtually assured.

The ATBancorp adjournment proposal: The affirmative vote of a majority of the shares of ATBancorp common stock represented in person or by proxy at the ATBancorp special meeting and entitled to vote on the proposal is required to approve the ATBancorp adjournment proposal.

Q: WHAT DOES THE ATBANCORP BOARD OF DIRECTORS RECOMMEND?

A: The ATBancorp board of directors recommends that ATBancorp shareholders vote "FOR" the ATBancorp merger proposal and "FOR" the ATBancorp adjournment proposal (if necessary or appropriate).

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Q: WHAT DO I NEED TO DO NOW?

A: After carefully reading and considering the information contained in this document, please vote your shares as soon as possible so that your shares will be represented at your respective company's special meeting. Please follow the instructions set forth on the proxy card or on the voting instruction form provided by the record holder if your shares are held in the name of your broker, bank or other nominee.

Q: HOW DO I VOTE?

A: *MidWestOne Special Meeting.* If you are a shareholder of record of MidWestOne as of the MidWestOne record date, you may submit your proxy before MidWestOne's special meeting in one of the following ways:

use the toll-free number shown on your proxy card;

visit the website shown on your proxy card to vote via the Internet; or

complete, sign, date and return the enclosed proxy card in the enclosed postage-paid envelope.

You may also cast your vote in person at the MidWestOne special meeting.

If your shares are held in "street name," through a broker, bank or other nominee, that institution will send you separate instructions describing the procedure for voting your shares. "Street name" shareholders who wish to vote at the meeting will need to obtain a proxy form from their broker, bank or other nominee.

ATBancorp Special Meeting. If you are a shareholder of ATBancorp as of the ATBancorp record date, you may submit your proxy before ATBancorp's special meeting by completing, signing, dating and returning the enclosed proxy card in the enclosed postage-paid envelope.

You may also cast your vote in person at the ATBancorp special meeting.

Q: HOW MANY VOTES DO I HAVE?

A: *MidWestOne Shareholders.* You are entitled to one vote for each share of MidWestOne common stock that you owned as of the MidWestOne record date. As of the close of business on the MidWestOne record date, there were approximately 12,222,145 outstanding shares of MidWestOne common stock entitled to vote. As of that date, approximately 3.2% of such outstanding shares of MidWestOne common stock were beneficially owned by the directors and executive officers of MidWestOne and their respective affiliates.

ATBancorp Shareholders. You are entitled to one vote for each share of ATBancorp common stock that you owned as of the ATBancorp record date. As of the close of business on the ATBancorp record date, there were 35,028 outstanding shares of ATBancorp common stock entitled to vote. As of that date, approximately 66.6% of such outstanding shares of ATBancorp common stock were beneficially owned by the directors and executive officers of ATBancorp and their respective affiliates. In addition, shareholders owning 62.41% of the outstanding shares of ATBancorp common stock are parties to a voting and support agreement with MidWestOne (the "Voting Agreement") requiring them to vote in favor of the ATBancorp merger proposal.

Q: WHEN AND WHERE ARE THE MIDWESTONE AND ATBANCORP SPECIAL MEETINGS?

A:

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The special meeting of MidWestOne shareholders will be held at 102 South Clinton Street, Summerwill Conference Room, Iowa City, IA 52240 at 10:00 a.m., Central Time, on Friday, January 11, 2019. Subject to space availability, all MidWestOne shareholders as of the MidWestOne record date, or their duly appointed proxies, may attend the MidWestOne special meeting.

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The special meeting of ATBancorp shareholders will be held at American Trust & Savings Bank, 895 Main Street, Dubuque, Iowa 52001 at 11:00 a.m., Central Time, on Thursday, January 10, 2019. All ATBancorp shareholders as of the ATBancorp record date, or their duly appointed proxies, may attend the ATBancorp special meeting.

Q: IF MY MIDWESTONE SHARES ARE HELD IN "STREET NAME" BY A BROKER, BANK OR OTHER NOMINEE, WILL MY BROKER, BANK OR OTHER NOMINEE VOTE MY SHARES FOR ME?

A: If you are a MidWestOne shareholder and your shares are held in "street name" in a stock brokerage account or by a bank or other nominee, you must provide the record holder of your shares with instructions on how to vote your shares. Please follow the voting instructions provided by your broker, bank or other nominee. Please note that you may not vote shares held in street name by returning a proxy card directly to MidWestOne or by voting in person at the MidWestOne special meeting unless you provide a "legal proxy," which you must obtain from your broker, bank or other nominee.

Under the rules of NASDAQ, brokers who hold shares in street name for a beneficial owner of those shares typically have the authority to vote in their discretion on "routine" proposals when they have not received instructions from beneficial owners. However, brokers are not allowed to exercise their voting discretion with respect to the approval of matters that NASDAQ determines to be "non-routine" without specific instructions from the beneficial owner. It is expected that all proposals to be voted on at the MidWestOne special meeting will be "non-routine" matters. Broker non-votes occur when a broker or nominee is not instructed by the beneficial owner of shares to vote on a particular proposal for which the broker does not have discretionary voting power.

If you are a MidWestOne shareholder and you hold your shares in street name and you do not instruct your broker, bank or other nominee on how to vote your shares:

your broker, bank or other nominee may not vote your shares on the MidWestOne merger proposal, which broker non-votes will have no effect on the vote count for such proposal;

your broker, bank or other nominee may not vote your shares on the MidWestOne stock issuance proposal, which broker non-votes will have no effect on the vote count for such proposal; and

your broker, bank or other nominee may not vote your shares on the MidWestOne adjournment proposal, which broker non-votes will have no effect on the vote count for such proposal.

Q: HOW WILL MY MIDWESTONE SHARES HELD IN THE EMPLOYEE STOCK OWNERSHIP PLAN BE VOTED?

A: MidWestOne maintains an employee stock ownership plan ("ESOP") that as of the MidWestOne record date owns 286,444 or 2.34% of the outstanding shares of MidWestOne's common stock. Employees of MidWestOne and MidWestOne Bank participate in the ESOP. As of the MidWestOne record date, 286,444 shares have been allocated to ESOP participants. Each ESOP participant has the right to instruct the trustee of the plan how to vote the shares of MidWestOne common stock allocated to his or her account under the ESOP. If an ESOP participant properly executes the voting instruction card, the ESOP trustee will vote the participant's shares in accordance with the participant's instructions. Shares of MidWestOne's common stock held in the ESOP, but not allocated to any participant's account, and allocated shares for which no voting instructions are received from participants, will be voted by the trustee in proportion to the results of the votes cast on the issue by the participants and beneficiaries.

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Q: WHAT IF I DO NOT VOTE OR I ABSTAIN?

A: For purposes of each of the MidWestOne special meeting and the ATBancorp special meeting, an abstention occurs when a shareholder attends the applicable special meeting, either in person or represented by proxy, but abstains from voting.

For the MidWestOne merger proposal, if a MidWestOne shareholder present in person at the MidWestOne special meeting abstains from voting, or responds by proxy with an "abstain" vote, it will have the same effect as a vote cast "AGAINST" this proposal. If a MidWestOne shareholder is not present in person at the MidWestOne special meeting at which there is a quorum and does not respond by proxy, it will have no effect on the vote count for such proposal.

For the MidWestOne stock issuance proposal and the MidWestOne adjournment proposal, if a MidWestOne shareholder present in person at the MidWestOne special meeting abstains from voting, or responds by proxy with an "abstain" vote, it will have the same effect as a vote cast "AGAINST" each such proposal. If a MidWestOne shareholder is not present in person at the MidWestOne special meeting at which there is a quorum and does not respond by proxy, it will have no effect on the vote count for each such proposal.

For the ATBancorp merger proposal, if an ATBancorp shareholder present in person at the ATBancorp special meeting abstains from voting, or responds by proxy with an "abstain" vote, it will have the same effect as a vote cast "AGAINST" this proposal. If an ATBancorp shareholder is not present in person at the ATBancorp special meeting at which there is a quorum and does not respond by proxy, it will have no effect on the vote count for this proposal.

For the ATBancorp adjournment proposal, if an ATBancorp shareholder present in person at the ATBancorp special meeting abstains from voting, or responds by proxy with an "abstain" vote, it will have the same effect as a vote cast "AGAINST" this proposal. If an ATBancorp shareholder is not present in person at the ATBancorp special meeting at which there is a quorum and does not respond by proxy, it will have no effect on the vote count for this proposal.

Q: WHAT WILL HAPPEN IF I RETURN MY PROXY OR VOTING INSTRUCTION CARD WITHOUT INDICATING HOW TO VOTE?

A: If you sign and return your proxy or voting instruction card without indicating how to vote on any particular proposal, the MidWestOne common stock represented by your proxy will be voted as recommended by the MidWestOne board of directors with respect to each MidWestOne proposal and the ATBancorp common stock represented by your proxy will be voted as recommended by the ATBancorp board of directors with respect to each ATBancorp proposal. Unless a MidWestOne shareholder or an ATBancorp shareholder, as applicable, checks the box on its proxy card to withhold discretionary authority, the proxyholders may use their discretion to vote on other matters relating to the MidWestOne special meeting or ATBancorp special meeting, as applicable.

Q: MAY I CHANGE MY VOTE AFTER I HAVE DELIVERED MY PROXY OR VOTING INSTRUCTION CARD?

A: *MidWestOne Shareholders.* Yes. You may change your vote at any time before your proxy is voted at the MidWestOne special meeting. You may do this in one of four ways:

by sending a notice of revocation to the corporate secretary of MidWestOne;

by logging onto the Internet website specified on your proxy card in the same manner you would to submit your proxy electronically or by calling the telephone number specified on your proxy card, in each case if you are eligible to do so and following the instructions on the proxy card;

by sending a completed proxy card bearing a later date than your original proxy card; or

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by attending the MidWestOne special meeting and voting in person.

If you choose any of the first three methods, you must take the described action such that the notice, internet vote or proxy card, as applicable, is received no later than the beginning of the MidWestOne special meeting.

If your shares are held in an account at a broker, bank or other nominee, you should contact your broker, bank or other nominee to change your vote.

ATBancorp Shareholders. Yes. You may change your vote at any time before your proxy is voted at the ATBancorp special meeting. You may do this in one of three ways:

by sending a notice of revocation to the corporate secretary of ATBancorp;

by sending a completed proxy card bearing a later date than your original proxy card; or

by attending the ATBancorp special meeting and voting in person.

If you choose either of the first two methods, you must take the described action such that the notice or proxy card, as applicable, is received no later than the beginning of the ATBancorp special meeting.

Q: DO I NEED IDENTIFICATION TO ATTEND THE MIDWESTONE MEETING IN PERSON?

A: Yes. Please bring proper identification, together with proof that you are a record owner of MidWestOne. If your shares of MidWestOne common stock are held in street name, please bring acceptable proof of ownership, such as a letter from your broker or an account statement showing that you beneficially owned shares of MidWestOne common stock on the record date.

Q: ARE ATBANCORP SHAREHOLDERS ENTITLED TO APPRAISAL RIGHTS?

A: Yes. ATBancorp shareholders will have the right to assert appraisal of their shares of ATBancorp common stock and obtain payment in cash for the fair value of their shares, but only if they perfect their dissenters' rights and comply with the applicable provisions of Iowa law. A copy of the Iowa statutory provisions related to appraisal rights is attached as *Appendix B* to this document, and a summary of these provisions can be found under "The Merger ATBancorp Shareholder Appraisal Rights" beginning on page 109. Due to the complexity of the procedures for exercising the right to seek appraisal, ATBancorp shareholders who are considering exercising such rights are encouraged to seek the advice of legal counsel. Failure to strictly comply with the applicable Iowa law provisions will result in the loss of the right of appraisal.

Q: WHAT ARE THE MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES OF THE MERGER TO ATBANCORP SHAREHOLDERS?

A: The Merger is intended to qualify, and the obligation of each party to complete the Merger is conditioned upon the party's receipt of an opinion to the effect that the Merger will qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code.

Accordingly, ATBancorp shareholders are not expected to recognize any gain or loss upon receipt of MidWestOne common stock in exchange for ATBancorp common stock in the Merger, and will recognize gain (but not loss) in an amount not to exceed any cash received as part of the Merger consideration (except with respect to any cash received in lieu of a fractional share of MidWestOne common stock, as discussed below under "Material U.S. Federal Income Tax Consequences of the Merger Cash Received In Lieu of a Fractional Share of MidWestOne Common Stock"). For a more detailed discussion of the material U.S. federal income tax consequences of the transaction,

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please see the section entitled "Material U.S. Federal Income Tax Consequences of the Merger" beginning on page 129.

The tax consequences of the Merger to any particular shareholder will depend on that shareholder's particular facts and circumstances. Accordingly, you are urged to consult your tax advisor to determine your tax consequences from the Merger.

Q: WHAT HAPPENS IF THE MERGER IS NOT COMPLETED?

A: If the Merger Agreement is terminated and the Merger is not completed, ATBancorp shareholders will not receive any consideration for their shares of ATBancorp common stock that otherwise would have been received in connection with the Merger. Instead, ATBancorp will remain an independent company. In addition, if the Merger Agreement is terminated under certain circumstances, ATBancorp would be required to pay MidWestOne a termination fee of \$7.6 million, plus reimburse MidWestOne's expenses up to \$1,000,000.

Q: SHOULD ATBANCORP SHAREHOLDERS SEND IN THEIR STOCK CERTIFICATES NOW?

A: No. ATBancorp shareholders should not send in any stock certificates now. If the Merger is approved, transmittal materials with instructions for their completion will be provided to ATBancorp shareholders under separate cover and the stock certificates should be sent at that time.

Q: WHAT SHOULD I DO IF I RECEIVE MORE THAN ONE SET OF VOTING MATERIALS?

A: ATBancorp and MidWestOne shareholders may receive more than one set of voting materials, including multiple copies of this document and multiple proxy cards or voting instruction cards. For example, if you hold shares of MidWestOne common stock in more than one brokerage account, you will receive a separate voting instruction card for each brokerage account in which you hold such shares. If you are a holder of record of ATBancorp common stock or MidWestOne common stock and your shares are registered in more than one name, you will receive one or more separate proxy cards or voting instruction cards for each company. Please complete, sign, date and return each proxy card and voting instruction card that you receive or otherwise follow the voting instructions set forth in this document to ensure that you vote every share of ATBancorp common stock or MidWestOne common stock that you own.

Q: WHO SHOULD I CONTACT IF I HAVE ANY QUESTIONS ABOUT THE PROXY MATERIALS OR VOTING?

A: If you are a MidWestOne shareholder and have any questions about the proxy materials or if you need assistance submitting your proxy or voting your shares or need additional copies of this document or the enclosed proxy card, you should contact MidWestOne Investor Relations at (319) 356-5800.

If you are an ATBancorp shareholder and have any questions about the proxy materials or if you need assistance submitting your proxy or voting your shares or need additional copies of this document or the enclosed proxy card, you should contact John W. Marshall, Secretary, at (563) 589-7178.

Table of Contents**SUMMARY**

This summary highlights selected information included in this document and does not contain all of the information that may be important to you. You should read this entire document and its appendices and the other documents to which the parties refer before you decide how to vote with respect to the proposals. In addition, the parties incorporate by reference important business and financial information about MidWestOne into this document. For a description of this information, please see the section entitled "Incorporation of Certain Documents by Reference" beginning on page 189. You may obtain the information incorporated by reference into this document without charge by following the instructions in the section entitled "Where You Can Find More Information" in the forepart of this document. Each item in this summary includes a page reference directing you to a more complete description of that item.

Unless the context otherwise requires, throughout this document, "MidWestOne" refers to MidWestOne Financial Group, Inc., "ATBancorp" refers to ATBancorp and "we," "us" and "our" refer collectively to MidWestOne and ATBancorp. Also, the parties refer to the proposed merger of ATBancorp with and into MidWestOne as the "Merger," the proposed merger of American Trust & Savings Bank and American Bank & Trust Wisconsin with MidWestOne Bank collectively as the "Bank Mergers" and the Agreement and Plan of Merger dated as of August 21, 2018, by and between MidWestOne and ATBancorp as the "Merger Agreement."

The Merger and the Merger Agreement (pages 63 and 113)

The terms and conditions of the Merger are contained in the Merger Agreement, which is attached to this document as *Appendix A*. The parties encourage you to read the Merger Agreement carefully, as it is the legal document that governs the Merger. Under the terms of the Merger Agreement, ATBancorp will merge with and into MidWestOne with MidWestOne as the surviving corporation.

Merger Consideration (page 114)

In the Merger, each share of ATBancorp common stock issued and outstanding immediately prior to the Effective Time, excluding any Cancelled Shares and any Dissenters' Shares, shall represent the right to receive without interest (i) 117.5500 shares of MidWestOne common stock (the "Per Share Stock Consideration") and (ii) \$992.51 (the "Per Share Cash Consideration").

No fractional shares of MidWestOne common stock will be issued to any shareholder of ATBancorp upon completion of the Merger. For each fractional share that would otherwise be issued, MidWestOne will pay an amount in cash (without interest) rounded to the nearest whole cent, determined by multiplying the Closing Acquiror Common Stock Price by the fractional share of MidWestOne common stock to which such former holder would otherwise be entitled. No interest will be paid or accrue on cash payable to holders in lieu of fractional shares.

The ultimate value of the consideration received by ATBancorp shareholders will depend on the trading value of MidWestOne common stock prior to the closing of the Merger. By way of example, the following MidWestOne closing prices would result in the corresponding total Merger consideration and consideration per share of ATBancorp common stock:

MidWestOne Closing Price	Total Merger Consideration	Consideration Per Share of ATBancorp Common Stock
\$ 28.98	\$ 154.09 million	\$ 4,399.11
\$ 33.25	\$ 171.67 million	\$ 4,901.05
\$ 26.60	\$ 144.29 million	\$ 4,119.34

It is currently expected that the former shareholders of ATBancorp as a group will receive shares in the Merger constituting approximately 25.2% of the outstanding shares of the combined company's

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common stock immediately after the Merger. As a result, current shareholders of *MidWestOne* as a group will own approximately 74.8% of the outstanding shares of the combined company's common stock immediately after the Merger.

Special Dividends (page 108)

The Merger Agreement provides that ATBancorp may pay a special dividend of \$907.8452 per share to the ATBancorp shareholders at any time prior to the Closing as determined by ATBancorp. Such dividend represents a portion of the proceeds to ATBancorp from the sale of Heritage Commerce Corp common stock received as consideration in connection with the sale of United American Bank. The special dividend was distributed to ATBancorp shareholders on September 24, 2018.

The Merger Agreement also provides that ATBancorp may pay a special dividend to shareholders based on the net proceeds (if any) received by ATBancorp in connection with the disposition by ATBancorp of the ATB Businesses prior to Closing, as required by the Merger Agreement. The payment of these special dividends by ATBancorp is in addition to the Merger consideration to be paid by *MidWestOne*. ATBancorp shareholders are not required to take any action to approve or receive these special dividends.

As required by the Merger Agreement, ATBancorp is currently in the process of negotiating with third parties the sale of the ATB Businesses. One purchaser would purchase the assets derived out of ATBancorp's California trust office and the other purchaser would purchase the rest of the assets, which make up a bulk of the ATB Businesses. As of the date of this joint proxy statement/prospectus, ATBancorp has not entered into a definitive agreement with the potential purchasers. As a result, it is not known when any such sale may close or whether ATBancorp will ultimately sell the ATB Businesses to the potential purchasers with whom it is in negotiations. It is also likely that any such sales will require the establishment of escrow accounts with the proceeds from the sales of the ATB Businesses. The establishment of any escrows will likely delay the time of a full distribution of the net proceeds from the sale of the ATB Businesses and any claims against the escrow accounts could materially decrease the amount of consideration payable to ATBancorp shareholders that they would have otherwise been entitled to through a special dividend.

Recommendation of the *MidWestOne* Board of Directors (page 68)

After careful consideration, the *MidWestOne* board of directors recommends that *MidWestOne* shareholders vote "FOR" the *MidWestOne* merger proposal, "FOR" the *MidWestOne* stock issuance proposal and "FOR" the *MidWestOne* adjournment proposal (if necessary or appropriate).

For a more complete description of *MidWestOne*'s reasons for the Merger and the recommendations of the *MidWestOne* board of directors, please see the section entitled "The Merger Recommendation of the *MidWestOne* Board of Directors and Reasons for the Merger" beginning on page 68.

Recommendation of the ATBancorp Board of Directors (page 83)

After careful consideration, the ATBancorp board of directors recommends that ATBancorp shareholders vote "FOR" the ATBancorp merger proposal and "FOR" the ATBancorp adjournment proposal (if necessary or appropriate).

In connection with entering into the Merger Agreement, *MidWestOne* entered into the Voting Agreement with certain holders of ATBancorp common stock. The shareholders that are party to the Voting Agreement beneficially own in the aggregate 62.41% of the outstanding shares of ATBancorp common stock. The Voting Agreement requires that the shareholders party thereto vote all of their shares of ATBancorp common stock in favor of the Merger and against any proposal made in

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opposition to or in competition with the Merger. The Voting Agreement will terminate upon the earlier of the consummation of the Merger or the termination of the Merger Agreement in accordance with its terms. Pursuant to the Voting Agreement, approval of the ATBancorp merger proposal is virtually assured. For more information regarding the Voting Agreement, please see the section entitled "The Merger Agreement Voting Agreement" beginning on page 127.

For a more complete description of ATBancorp's reasons for the Merger and the recommendations of the ATBancorp board of directors, please see the section entitled "The Merger Recommendation of the ATBancorp Board of Directors and Reasons for the Merger" beginning on page 83.

Opinions of Financial Advisors (pages 70 and 86)

Opinion of MidWestOne's Financial Advisor

In connection with the Merger, MidWestOne's financial advisor, Piper Jaffray & Co. ("Piper Jaffray") delivered a written opinion, dated August 21, 2018, to MidWestOne's board of directors as to the fairness, from a financial point of view and as of the date of the opinion, to MidWestOne of the aggregate Merger consideration in the proposed Merger. The full text of Piper Jaffray's opinion, which describes the procedures followed, assumptions made, matters considered, and qualifications and limitations on the review undertaken by Piper Jaffray in preparing the opinion, is attached as *Appendix C* to this joint proxy statement/prospectus. **This opinion was provided for the information and assistance of the MidWestOne board of directors in connection with its consideration of the Merger. The opinion did not address the merits of MidWestOne's underlying decision to engage in the Merger or the relative merits of the Merger compared to any alternative business strategy or transaction in which MidWestOne might engage.** The opinion does not constitute a recommendation to the MidWestOne board of directors or any holder of MidWestOne common stock as to how any MidWestOne board member or such holder should vote with respect to the Merger.

For further information, please see the section entitled "The Merger Opinion of MidWestOne's Financial Advisor" beginning on page 70.

Opinion of ATBancorp's Financial Advisor

In connection with the Merger, the ATBancorp board of directors received an opinion from Sandler O'Neill & Partners, L.P. ("Sandler O'Neill"), ATBancorp's financial advisor. On August 20, 2018, Sandler O'Neill rendered its oral opinion to the ATBancorp board of directors (which was confirmed in writing by delivery of Sandler O'Neill's written opinion dated August 20, 2018) to the effect that, as of such date, the per share Merger consideration to be received by holders of ATBancorp common stock in the Merger was fair to the holders of ATBancorp common stock, from a financial point of view. The full text of Sandler O'Neill's written opinion is attached as *Appendix D* to this joint proxy statement/prospectus. ATBancorp shareholders should read the entire opinion for a discussion of, among other things, the assumptions made, matters considered and qualifications and limitations on the review undertaken by Sandler O'Neill in rendering its opinion.

Sandler O'Neill's opinion speaks only as of the date of the opinion. The opinion was directed to ATBancorp's board of directors in connection with its consideration of the Merger Agreement and the Merger and does not constitute a recommendation to any shareholder of ATBancorp as to how any such shareholder should vote at any meeting of shareholders called to consider and vote upon the approval of the Merger Agreement and the Merger. Sandler O'Neill's opinion was directed only to the fairness, from a financial point of view, of the per share Merger consideration to the holders of ATBancorp common stock and does not address the underlying business decision of ATBancorp to engage in the Merger, the form or structure of the Merger or any other transactions contemplated in the Merger Agreement, the relative merits of the Merger as compared to any other alternative

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transactions or business strategies that might exist for ATBancorp or the effect of any other transaction in which ATBancorp might engage.

For further information, please see the section entitled "The Merger Opinion of ATBancorp's Financial Advisor" beginning on page 86.

MidWestOne Special Meeting of Shareholders (page 53)

The MidWestOne special meeting will be held at 102 South Clinton Street, Summerwill Conference Room, Iowa City, IA 52240, at 10:00 a.m., Central Time, on Friday, January 11, 2019. At the MidWestOne special meeting, MidWestOne shareholders will be asked to approve the MidWestOne merger proposal, the MidWestOne stock issuance proposal and the MidWestOne adjournment proposal (if necessary or appropriate).

MidWestOne's board of directors has fixed the close of business on November 26, 2018 as the record date for determining the holders of MidWestOne common stock entitled to receive notice of and to vote at the MidWestOne special meeting. As of the MidWestOne record date, there were 12,222,145 shares of MidWestOne common stock outstanding and entitled to vote at the MidWestOne special meeting held by approximately 425 holders of record. Each share of MidWestOne common stock entitles the holder to one vote on each proposal to be considered at the MidWestOne special meeting. As of the MidWestOne record date, directors and executive officers of MidWestOne owned and were entitled to vote 392,994 shares of MidWestOne common stock, representing approximately 3.2% of the shares of MidWestOne common stock outstanding on that date. MidWestOne currently expects that MidWestOne's directors and executive officers will vote their shares in favor of the proposals to be presented at the special meeting, although none of them has entered into any agreements obligating them to do so. As of the MidWestOne record date, ATBancorp beneficially held no shares of MidWestOne common stock.

Approval of the MidWestOne merger proposal requires the affirmative vote of a majority of the votes entitled to be cast on the proposal. Approval of the MidWestOne stock issuance proposal and the MidWestOne adjournment proposal requires the affirmative vote of a majority of the shares of MidWestOne common stock represented in person or by proxy at the MidWestOne special meeting and entitled to vote on such proposals.

ATBancorp Special Meeting of Shareholders (page 59)

The ATBancorp special meeting will be held at American Trust & Savings Bank, 895 Main Street, Dubuque, Iowa 52001, at 11:00 a.m., Central Time, on Thursday, January 10, 2019. At the ATBancorp special meeting, ATBancorp shareholders will be asked to approve the ATBancorp merger proposal and, if necessary or appropriate, the ATBancorp adjournment proposal.

ATBancorp's board of directors has fixed the close of business on November 15, 2018 as the record date for determining the holders of ATBancorp common stock entitled to receive notice of and to vote at the ATBancorp special meeting. As of the ATBancorp record date, there were 35,028 shares of ATBancorp common stock outstanding and entitled to vote at the ATBancorp special meeting held by 18 holders of record. Each share of ATBancorp common stock entitles the holder to one vote on each proposal to be considered at the ATBancorp special meeting. As of the ATBancorp record date, directors and executive officers of ATBancorp owned and were entitled to vote 23,323 shares of ATBancorp common stock, representing approximately 66.6% of the shares of ATBancorp common stock outstanding on that date. In connection with entering into the Merger Agreement, MidWestOne entered into the Voting Agreement with certain holders of ATBancorp common stock. The shareholders that are party to the Voting Agreement beneficially own in the aggregate 62.41% of the outstanding shares of ATBancorp common stock. The Voting Agreement requires that the shareholders party thereto vote all of their shares of ATBancorp common stock in favor of the Merger and against

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alternative acquisition proposals. The Voting Agreement will terminate upon the earlier of the consummation of the Merger or the termination of the Merger Agreement in accordance with its terms. As of the ATBancorp record date, MidWestOne beneficially held no shares of ATBancorp's common stock.

Approval of the ATBancorp merger proposal requires the affirmative vote of a majority of the shares of ATBancorp common stock represented in person or by proxy at the ATBancorp special meeting and entitled to vote on this proposal. Pursuant to the Voting Agreement, approval of the ATBancorp merger proposal is virtually assured. Approval of the ATBancorp adjournment proposal requires the affirmative vote of a majority of the shares of ATBancorp common stock represented in person or by proxy at the ATBancorp special meeting and entitled to vote on this proposal.

ATBancorp's Directors and Executive Officers Have Certain Interests in the Merger (page 102)

ATBancorp's executive officers and directors have interests in the Merger that are different from, or in addition to, the interests of ATBancorp's shareholders generally. Such interests include change in control agreements, deferred compensation agreements and salary continuation agreements with certain executive officers and the right to indemnification and insurance coverage following the consummation of the Merger. The members of the ATBancorp board of directors were aware of and considered these interests, among other matters, when they approved the Merger Agreement and recommended that ATBancorp shareholders approve the ATBancorp merger proposal. These interests are described in more detail under the section entitled "The Merger Interests of ATBancorp Directors and Executive Officers in the Merger" beginning on page 101.

Management and Board of Directors of MidWestOne after the Merger (page 101)

Pursuant to the Merger Agreement, MidWestOne shall take all appropriate action, subject to and in accordance with MidWestOne's articles of incorporation, bylaws, board policies and applicable legal requirements, to appoint two individuals to MidWestOne's Board who are designated by ATBancorp, by a vote of at least 75% of ATBancorp's Board, and are agreeable to MidWestOne. One of the individuals so designated by ATBancorp must not be a current officer, director or shareholder of ATBancorp and must have an established history in the Dubuque, Iowa business community (the "Dubuque Community Director"). One individual will be designated to serve as a Class I director and the other individual will be designated to serve as a Class II director, with the class assignments determined by MidWestOne, in each case, effective immediately upon the effectiveness of the Merger.

Regulatory Approvals Required for the Merger (page 106)

Completion of the Merger and the Bank Mergers are subject to various regulatory approvals, including approval or waiver from the Board of Governors of the Federal Reserve System (the "Federal Reserve Board"), and the approvals of the Federal Deposit Insurance Corporation (the "FDIC"), the Iowa Division of Banking (the "IDB") and the Wisconsin Department of Financial Institutions (the "WDFI"). The parties have filed notices and applications to obtain the necessary regulatory approvals or waivers, as applicable of the Federal Reserve Board, FDIC, the IDB and WDFI. On October 11, 2018, the Federal Reserve Board informed the parties that its legal division would not recommend that the Federal Reserve Board require the filing of an application by MidWestOne in connection with the Merger, on October 29, 2018, the FDIC provided the parties with its approval of the Bank Mergers and on November 14, 2018, the WDFI provided the parties with its approval of the acquisition of ABTW by MidWestOne. The regulatory approvals to which completion of the Merger and Bank Mergers are subject are described in more detail under the section entitled "The Merger Regulatory Approvals Required for the Merger" beginning on page 106.

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Conditions to Consummation of the Merger (page 124)

The respective obligation of each party to effect the Merger is subject to the satisfaction or written waiver at or prior to the Effective Time of each of the following conditions:

all actions and approvals by governmental authorities and certain other specified actions and approvals shall have been taken and obtained and shall remain in full force and effect and all statutory waiting periods shall have expired or been terminated and no such requisite regulatory approval shall have imposed a restriction or condition on, or requirement of, such approval that would, after the Effective Time, reasonably be expected by the board of directors of MidWestOne to materially restrict or burden, or impair in any material respect the benefits of the contemplated transactions to, or require a materially burdensome modification of, the businesses, activities, governance, legal structure, capital structure, compensation or fee arrangements of MidWestOne or its subsidiaries;

ATBancorp and MidWestOne shall have each obtained the approval of the Merger Agreement and the transactions contemplated thereby by their respective shareholders;

no order issued by any court or governmental agency or other legal restraint or prohibition preventing the consummation of the Merger or the other transactions contemplated by the Merger Agreement shall be in effect, and no legal requirement shall have been enacted, entered, promulgated or enforced by any governmental authority which prohibits or makes illegal consummation of the Merger;

the S-4 registration statement of which this joint proxy statement/prospectus is a part shall have become effective under the Securities Act, and no stop orders suspending such effectiveness shall be in effect, and no proceeding shall have been commenced or be pending or threatened for such purpose; and

MidWestOne shall have filed with the Nasdaq Stock Market, LLC a notification form for the listing of all shares of MidWestOne common stock to be delivered in the Merger, and the Nasdaq Stock Market, LLC shall not have objected to the listing of such shares.

ATBancorp's obligation to effect the Merger is also subject to the fulfillment or waiver of the following conditions:

the accuracy of the representations and warranties of MidWestOne set forth in the Merger Agreement as of the date of the Merger Agreement and as of the Closing Date as though made at and as of the Closing Date (unless any such representation or warranty is made only as of a specific date, in which case as of such specific date);

the performance by MidWestOne in all material respects of all covenants and obligations to be performed or complied with by it under the terms of the Merger Agreements on or prior to the Closing Date;

the receipt of a certificate, signed on behalf of MidWestOne by an executive officer, certifying that certain of the conditions to ATBancorp's obligation to complete the Merger have been satisfied;

receipt by ATBancorp of a written opinion of its tax accountants to the effect that the Merger will constitute a "reorganization" within the meaning of Section 368(a) of the Internal Revenue Code; and

from the date of the Merger Agreement to closing, no material adverse effect shall have occurred with respect to MidWestOne or any of its subsidiaries.

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MidWestOne's obligation to effect the Merger is also subject to the satisfaction or waiver of the following conditions:

the accuracy of the representations and warranties of ATBancorp set forth in the Merger Agreement as of the date of the Merger Agreement and as of the Closing Date as though made at and as of the Closing Date (unless any such representation or warranty is made only as of a specific date, in which case as of such specific date);

the performance by ATBancorp in all material respects of all covenants and obligations to be performed or complied with by it under the terms of the Merger Agreements on or prior to the Closing Date, and ATBancorp's obtainment of and provision to MidWestOne of copies of all ATBancorp required approvals;

the receipt of a certificate, signed on behalf of ATBancorp by an executive officer certifying that certain of the conditions to MidWestOne's obligation to complete the Merger have been satisfied;

the receipt by MidWestOne of a written opinion of its counsel to the effect that the Merger will constitute a "reorganization" within the meaning of Section 368(a) of the Internal Revenue Code;

from the date of the Merger Agreement to closing, no material adverse effect shall have occurred with respect to ATBancorp or any of its subsidiaries;

ATBancorp shall have satisfied all of the conditions necessary to complete the redemption of all of ATBancorp's subordinated debentures bearing a fixed annual rate per annum of 6.50% and maturing September 15, 2021, in the aggregate principal amount of \$9,600,000;

the receipt of duly executed copies of the Lock-Up Agreements, which have been delivered;

the total number of outstanding shares of ATBancorp common stock that have duly exercised their appraisal rights shall not exceed 7.5% of the outstanding shares of ATBancorp common stock;

ATBancorp shall have completed the disposition of an aircraft and the ATB Businesses; and

ATBancorp shall have delivered to MidWestOne all other instruments and documents that MidWestOne may reasonably request to effectuate the transactions contemplated in the Merger Agreement.

Acquisition Proposals (page 123)

Under the terms of the Merger Agreement, ATBancorp has agreed that it shall not, and it shall cause its subsidiaries and its subsidiaries' representatives not to, directly or indirectly:

initiate, solicit, encourage or knowingly facilitate any inquiries or proposals with respect to, or engage in any discussions or negotiations concerning, or provide any information, including any confidential or nonpublic information, or data to, or have any discussions with, any person relating to, any proposal or offer that constitutes, or could reasonably be expected to lead to, an acquisition proposal; or

approve, recommend or enter into, or propose to approve, recommend or enter into, any letter of intent or similar document, memorandum of understanding, agreement, commitment, or agreement in principle with respect to an acquisition proposal.

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ATBancorp has agreed to promptly notify *MidWestOne* of any such unsolicited acquisition proposal or of any request for information relating to ATBancorp or any of its subsidiaries that is

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reasonably likely to lead to or that contemplates an acquisition proposal, including the identity of the proposed acquirer and the material terms and conditions of such proposal.

Termination of the Merger Agreement (page 126)

MidWestOne and ATBancorp may mutually agree at any time to terminate the Merger Agreement without completing the Merger. The Merger Agreement may also be terminated by MidWestOne or ATBancorp if:

the other party breaches or fails to perform any of its representations, warranties, covenants or agreements set forth in the Merger Agreement, which breach or failure to perform, either individually or together with other such breaches, in the aggregate, if occurring or continuing on the date on which the Closing would otherwise occur would result in the failure of any of the conditions to closing and such breach or failure to perform has not been or cannot be cured on or prior to the earlier of two business days prior to June 30, 2019 (the "Termination Date") and 30 days following written notice to the party committing such breach, making such untrue representation and warranty or failing to perform;

(i) any regulatory authority that must grant a requisite regulatory approval has denied approval of any of the contemplated transactions and such denial has become final and nonappealable; (ii) any application, filing or notice for a requisite regulatory approval has been withdrawn at the request or recommendation of the applicable regulatory authority; or (iii) if (A) ATBancorp does not obtain the approval of the Merger Agreement and the transactions contemplated thereby by its shareholders or (B) MidWestOne does not obtain the approval of the issuance of shares of common stock in connection with the Merger by its shareholders, each following the ATBancorp shareholders' meeting or the MidWestOne shareholders' meeting, respectively; provided, however, that the right to terminate shall not be available to a party whose failure to fulfill any of its obligations under the Merger Agreement has been the cause of or resulted in the occurrence of any event described in clause (iii) above and such failure constitutes a material breach of the Merger Agreement;

the Effective Time has not occurred at or before the Termination Date; provided, however, that the right to terminate shall not be available to any party whose failure to fulfill any of its obligations under the Merger Agreement has been the cause of, or has resulted in, the failure of the Effective Time to occur on or before such date and such failure constitutes a material breach of the Merger Agreement; or

any court of competent jurisdiction or other regulatory authority shall have issued a judgment, order, injunction, rule or decree or taken any other action restraining, enjoining or otherwise prohibiting any of the contemplated transactions and such judgment, order, injunction, rule, decree or other action shall have become final and nonappealable.

Further, MidWestOne may terminate the Merger Agreement if:

ATBancorp makes a Company Adverse Recommendation (as defined in the Merger Agreement) or if ATBancorp materially breaches certain of its other obligations under the Merger Agreement relating to holding a shareholders' meeting or acquisition proposals; and

if certain events, conditions or circumstances require further investigation, remedial or cleanup action under certain environmental laws and such expenditures are reasonably expected to exceed \$10,000,000.

Further, ATBancorp may terminate the Merger Agreement if:

if both of the following conditions are satisfied on the Determination Date, such termination to be effective on the 10th day following the Determination Date: (i) the Final Acquiror Market

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Value is less than \$26.60; and (ii) the number obtained by dividing the Final Acquiror Market Value by \$33.25 shall be less than the Index Ratio multiplied by 0.80; *subject, however*, to MidWestOne's exercise of its option to increase the per share stock consideration payable to ATBancorp shareholders, in which event no termination shall occur; or

under certain circumstances it receives an acquisition proposal that would constitute a superior proposal.

For more information, please see the section entitled "The Merger Agreement Termination of the Merger Agreement" beginning on page 126.

Termination Fees (page 127)

The Merger Agreement also provides that upon termination of the Merger Agreement by either MidWestOne under certain circumstances, including ATBancorp failing to convene a meeting of its shareholders to consider and approve the Merger Agreement and the transactions contemplated thereby, or by ATBancorp by accepting a superior proposal, ATBancorp will be obligated to pay MidWestOne a termination fee of \$7.6 million, plus the aggregate amount of MidWestOne's expenses incurred in connection with the Merger, provided that the aggregate amount of such expenses shall not exceed \$1,000,000.

Voting Agreement (page 127)

In connection with entering into the Merger Agreement, MidWestOne entered into the Voting Agreement with certain holders of ATBancorp common stock. The shareholders that are party to the Voting Agreement beneficially own in the aggregate 62.41% of the outstanding shares of ATBancorp common stock. The Voting Agreement requires that the shareholders party thereto vote all of their shares of ATBancorp common stock in favor of the Merger and against any proposal made in opposition to or in competition with the Merger. The Voting Agreement will terminate upon the earlier of the consummation of the Merger or the termination of the Merger Agreement in accordance with its terms. Pursuant to the Voting Agreement, approval of the ATBancorp merger proposal is virtually assured. For more information regarding the Voting Agreement, please see the section entitled "The Merger Agreement Voting Agreement" beginning on page 127.

Lock-Up Agreements (page 128)

In connection with entering into the Merger Agreement, MidWestOne entered into Lock-Up Agreements ("Lock-Up Agreements") with certain holders of ATBancorp common stock. The shareholders that are party to the Lock-Up Agreements beneficially own in the aggregate 62.41% of the outstanding shares of ATBancorp common stock. The Lock-Up Agreements require that the shareholders that are parties thereto, during the period commencing as of the date on which the Effective Time occurs and expiring 180 days thereafter, not directly or indirectly, with certain exceptions, take any action to: (i) offer, sell, contract to sell, sell any option, warrant or contract to purchase, purchase any option, warrant or contract to sell, transfer, pledge or otherwise dispose of, or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition or otherwise) of any shares of MidWestOne common stock whether owned as of the time of the Lock-Up Agreements or subsequently acquired, including shares of MidWestOne common stock received by the shareholder pursuant to the Merger Agreement; (ii) enter into any swap or other derivative transaction that transfers to another, in whole or in part, any of the economic benefits or risks of ownership of MidWestOne common stock, whether any such transaction is to be settled by delivery of MidWestOne common stock or other securities, in cash or otherwise; or (iii) publicly disclose an intention to effect any transaction contemplated by clause (i) or (ii). If the Merger Agreement is terminated without the

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consummation of the Merger, the Lock-Up Agreements will automatically terminate. For more information regarding the Lock-Up Agreements, please see the section entitled "The Merger Agreement Lock-Up Agreements" beginning on page 128.

Material U.S. Federal Income Tax Consequences of the Merger (page 129)

The Merger is intended to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code. Assuming the Merger qualifies as a reorganization, a shareholder of ATBancorp generally will not recognize any gain or loss upon receipt of MidWestOne common stock in exchange for ATBancorp common stock in the Merger, and will recognize gain (but not loss) in an amount not to exceed any cash received as part of the Merger consideration (except with respect to any cash received in lieu of a fractional share of MidWestOne common stock, as discussed below under "Material U.S. Federal Income Tax Consequences of the Merger Cash Received In Lieu of a Fractional Share of MidWestOne Common Stock"). It is a condition to the completion of the Merger that MidWestOne and ATBancorp receive written opinions from their tax counsel or tax accountants to the effect that the Merger will qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code.

Tax matters are complicated and the tax consequences of the Merger to each ATBancorp shareholder may depend on such shareholder's particular facts and circumstances. ATBancorp shareholders are urged to consult their tax advisors to understand fully the tax consequences to them of the Merger. For more information, please see the section entitled "Material U.S. Federal Income Tax Consequences of the Merger" beginning on page 129.

Comparison of Shareholders' Rights (page 134)

The rights of ATBancorp shareholders who continue as MidWestOne shareholders after the Merger will be governed by the articles of incorporation and bylaws of MidWestOne rather than by the articles of incorporation and bylaws of ATBancorp. For more information, please see the section entitled "Comparison of Shareholders' Rights" beginning on page 134.

The Parties (pages 141 and 142)

MidWestOne Financial Group, Inc.
102 South Clinton Street
Iowa City, Iowa 52240
Phone: (319) 356-5800

MidWestOne is an Iowa corporation incorporated in 1983, is a bank holding company registered under the Bank Holding Company Act of 1956, as amended (the "BHC Act") and a financial holding company under the Gramm-Leach-Bliley Act of 1999. As of June 30, 2018, MidWestOne had consolidated total assets of \$3.276 billion, total loans held for investment of \$2.3 billion, deposits of \$2.6 billion and shareholders' equity of \$346 million.

ATBancorp
895 Main Street
Dubuque, Iowa 52001
Phone: (563) 582-1841

ATBancorp is an Iowa corporation incorporated in 1985 and a bank holding company registered under the BHC Act. As of June 30, 2018, ATBancorp had consolidated total assets of \$1.4 billion, total loans held for investment of \$1.1 billion, deposits of \$1.1 billion and shareholders' equity of \$146.0 million.

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Risk Factors (page 44)

Before voting at the MidWestOne special meeting or ATBancorp special meeting, you should carefully consider all of the information contained in or incorporated by reference into this document, including the risk factors set forth in the section entitled "Risk Factors" beginning on page 44 or described in MidWestOne's Annual Report on Form 10-K for the year ended on December 31, 2017 and other reports filed with the SEC, which are incorporated by reference into this document. Please see "Where You Can Find More Information" in the forepart of this document and "Incorporation of Certain Documents by Reference" beginning on page 189.

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CERTAIN FINANCIAL INFORMATION REGARDING MIDWESTONE AND ATBANCORP

Selected Financial Information of MidWestOne

The following table summarizes consolidated financial results achieved by MidWestOne for the periods and at the dates indicated and should be read in conjunction with MidWestOne's consolidated financial statements and the notes to the consolidated financial statements contained in reports that MidWestOne has previously filed with the SEC. Historical financial information for MidWestOne can be found in its Annual Report on Form 10-K for the year ended December 31, 2017 and its Quarterly Report on Form 10-Q for the nine-month period ended September 30, 2018. Please see the section entitled "Where You Can Find More Information" for instructions on how to obtain the information

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that has been incorporated by reference. You should not assume the results of operations for past years indicate results for any future period.

	As of and for the Years Ended December 31,				
	2017	2016	2015	2014	2013
	(dollars in thousands except per share)				
Consolidated Statement of Income Data:					
Interest income	\$ 119,320	\$ 112,328	\$ 100,700	\$ 64,404	\$ 66,094
Interest expense	15,145	12,722	10,648	9,551	12,132
Net interest income	104,175	99,606	90,052	54,853	53,962
Provision for loan losses	17,334	7,983	5,132	1,200	1,350
Net interest income after provision for loan losses	86,841	91,623	84,920	53,653	52,612
Noninterest income	22,370	23,434	21,193	15,313	14,728
Noninterest expense	80,136	87,806	73,176	43,413	42,087
Income before income taxes	29,075	27,251	32,937	25,553	25,253
Income tax expense	10,376	6,860	7,819	7,031	6,646
Net income	\$ 18,699	\$ 20,391	\$ 25,118	\$ 18,522	\$ 18,607
Common Share Data:					
Basic earnings per share	\$ 1.55	\$ 1.78	\$ 2.42	\$ 2.20	\$ 2.19
Diluted earnings per share	\$ 1.55	\$ 1.78	\$ 2.42	\$ 2.19	\$ 2.18
Cash dividends declared per share	\$ 0.67	\$ 0.64	\$ 0.60	\$ 0.58	\$ 0.50
Book value per share	\$ 27.85	\$ 26.71	\$ 25.96	\$ 23.07	\$ 20.99
Weighted average shares outstanding-basic	12,038	11,430	10,363	8,405	8,478
Weighted average shares outstanding-diluted	12,063	11,456	10,391	8,433	8,525
Shares outstanding at end of period	12,220	11,436	11,409	8,356	8,482
Consolidated Balance Sheet Data:					
Cash and cash equivalents	\$ 50,972	\$ 43,228	\$ 47,097	\$ 23,409	\$ 24,890
Investment securities	\$ 643,279	\$ 645,910	\$ 545,664	\$ 526,466	\$ 531,186
Loans held for investment, net of unearned income	\$ 2,286,695	\$ 2,165,143	\$ 2,151,942	\$ 1,132,519	\$ 1,088,412
Allowance for loan losses	\$ 28,059	\$ 21,850	\$ 19,427	\$ 16,363	\$ 16,179
Total assets	\$ 3,212,271	\$ 3,079,575	\$ 2,979,975	\$ 1,800,302	\$ 1,755,218
Total deposits	\$ 2,605,319	\$ 2,480,448	\$ 2,463,521	\$ 1,408,542	\$ 1,374,942
Total borrowings and debt	\$ 248,522	\$ 274,063	\$ 202,050	\$ 186,693	\$ 189,029
Shareholders' equity	\$ 340,304	\$ 305,456	\$ 296,178	\$ 192,731	\$ 178,016
Average Balance Sheet Data:					
Average assets	\$ 3,097,496	\$ 2,993,875	\$ 2,773,095	\$ 1,760,776	\$ 1,756,344
Average earning assets	\$ 2,853,830	\$ 2,747,493	\$ 2,541,681	\$ 1,669,130	\$ 1,667,251
Average shareholders' equity	\$ 334,966	\$ 304,670	\$ 255,307	\$ 186,375	\$ 175,666
Financial Ratios:					
Return on average assets(a)	0.60%	0.68%	0.91%	1.05%	1.06%
Return on average equity(b)	5.58%	6.69%	9.84%	9.94%	10.59%
Net interest margin (FTE)(c)	3.83%	3.80%	3.71%	3.53%	3.46%
Efficiency ratio, adjusted(d)	58.64%	66.43%	61.36%	58.71%	57.11%

(a)

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Return on average assets is determined by dividing net income by average assets.

(b)

Return on average equity is determined by dividing net income by average shareholders' equity.

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- (c) Net interest margin (FTE) is determined by dividing net interest income, reported on a fully tax-equivalent basis assuming a 35% tax rate, by average earning assets. As presented, net interest margin (FTE) is a non-GAAP financial measure, and the most directly comparable GAAP measure is net interest margin. MidWestOne believes that the presentation of net interest margin on a tax equivalent basis provides useful information to investors regarding its results of operations because it provides a more accurate representation of MidWestOne's actual net interest margin. A reconciliation of net interest margin is presented below.
- (d) As presented, the adjusted efficiency ratio is a non-GAAP financial measure. MidWestOne believes that the presentation of the adjusted efficiency ratio provides useful information to investors regarding its results of operations because it provides additional insights as to MidWestOne's current performance. A reconciliation is presented below.

	As of and for the Years Ended December 31,				
	2017	2016	2015	2014	2013
Nonperforming Assets					
Nonperforming assets to total assets	0.81%	0.99%	0.68%	0.83%	0.89%
Nonperforming loans to loans held for investment, net of unearned income	1.04%	1.31%	0.54%	1.15%	1.27%
Allowance for loan losses to loans held for investment, net of unearned income	1.23%	1.01%	0.90%	1.44%	1.49%
Allowance for loan losses to nonperforming loans	117.59%	76.76%	168.52%	125.67%	117.44%
Net loan charge-offs to average loans	0.51%	0.26%	0.11%	0.09%	0.11%

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The following tables provide a reconciliation of the non-GAAP measures to the most comparable GAAP equivalent, in each case as of the dates presented.

	As of and for the Years Ended December 31,				
	2017	2016	2015	2014	2013
	(dollars in thousands)				
Net Interest Margin Tax Equivalent Adjustment					
Net interest income	\$ 104,175	\$ 99,606	\$ 90,052	\$ 54,853	\$ 53,962
Plus tax equivalent adjustment:(1)					
Loans	1,730	1,692	1,293	1,157	963
Investment securities	3,297	3,023	2,898	2,880	2,795
Tax equivalent net interest income(1)	\$ 109,202	\$ 104,321	\$ 94,243	\$ 58,890	\$ 57,720
Average interest-earning assets	\$ 2,853,830	\$ 2,747,493	\$ 2,541,681	\$ 1,669,130	\$ 1,667,251
Net Interest Margin (FTE)	3.83%	3.80%	3.71%	3.53%	3.46%
Net Interest Margin	3.65%	3.63%	3.54%	3.29%	3.24%
Operating Expense					
Total noninterest expense	\$ 80,136	\$ 87,806	\$ 73,176	\$ 43,413	\$ 42,087
Less: Amortization of intangibles	(3,125)	(3,970)	(3,271)	(547)	(663)
Operating expense	\$ 77,011	\$ 83,836	\$ 69,905	\$ 42,866	\$ 41,424
Operating Revenue					
Tax-equivalent net interest income(1)	\$ 109,202	\$ 104,321	\$ 94,243	\$ 58,890	\$ 57,720
Plus: Noninterest income	22,370	23,434	21,193	15,313	14,728
Less: Gain on sale or call of available for sale securities	188	464	1,011	1,227	65
Gain on sale or call of held to maturity securities	53				
Gain (loss) on sale of premises and equipment	2	(44)	(29)	(1)	(3)
Other gain (loss)	11	1,133	527	(37)	(146)
Operating Revenue	\$ 131,318	\$ 126,202	\$ 113,927	\$ 73,014	\$ 72,532
Efficiency Ratio, adjusted	58.64%	66.43%	61.36%	58.71%	57.11%
Efficiency Ratio	63.33%	71.36%	65.78%	61.87%	61.27%

(1)

Computed on a tax equivalent basis, assuming a federal income tax rate of 35%.

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	As of and for the Nine Months Ended September 30,	
	2018	2017
	(dollars in thousands except per share)	
Consolidated Statement of Income Data:		
Interest income	\$ 95,425	\$ 88,782
Interest expense	16,170	11,018
Net interest income	79,255	77,764
Provision for loan losses	4,050	6,665
Net interest income after provision for loan losses	75,205	71,099
Noninterest income	17,143	16,836
Noninterest expense	63,700	60,043
Income before income taxes	28,648	27,892
Income tax expense	5,921	7,603
Net income	\$ 22,727	\$ 20,289
Common Share Data:		
Basic earnings per share	\$ 1.86	\$ 1.69
Diluted earnings per share	\$ 1.86	\$ 1.69
Cash dividends declared per share	\$ 0.585	\$ 0.50
Book value per share	\$ 28.57	\$ 28.36
Weighted average shares outstanding-basic	12,221	11,978
Weighted average shares outstanding-diluted	12,238	12,000
Shares outstanding at end of period	12,221	12,219
Consolidated Balance Sheet Data:		
Cash and cash equivalents	\$ 53,379	\$ 50,972
Investment securities	\$ 602,296	\$ 643,279
Loans held for investment, net of unearned income	\$ 2,377,649	\$ 2,286,695
Allowance for loan losses	\$ 31,278	\$ 28,059
Total assets	\$ 3,267,965	\$ 3,212,271
Total deposits	\$ 2,632,259	\$ 2,605,319
Total borrowings and debt	\$ 263,593	\$ 248,522
Shareholders' equity	\$ 349,189	\$ 340,304
Average Balance Sheet Data:		
Average assets	\$ 3,258,283	\$ 3,102,348
Average earning assets	\$ 3,004,892	\$ 2,858,715
Average shareholders' equity	\$ 348,131	\$ 344,961
Financial Ratios:		
Return on average assets(a)	0.94%	0.88%
Return on average equity(b)	8.84%	8.20%
Net interest margin (FTE)(c)	3.64%	3.85%
Efficiency ratio, adjusted(d)	63.30%	58.78%
Nonperforming Assets		
Nonperforming assets to total assets	0.89%	0.87%
Nonperforming loans to loans held for investment, net of unearned income	1.20%	1.14%
Allowance for loan losses to loans held for investment, net of unearned income	1.32%	1.17%
Allowance for loan losses to nonperforming loans	109.92%	102.40%
Net loan charge-offs to average loans	0.05%	0.12%

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- (a) Return on average assets is determined by dividing net income by average assets.
- (b) Return on average equity is determined by dividing net income by average shareholders' equity.

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- (c) Net interest margin (FTE) is determined by dividing net interest income, reported on a fully tax-equivalent basis assuming a federal income tax rate of 21% for 2018, and 35% for 2017, by average earning assets. As presented, net interest margin (FTE) is a non-GAAP financial measure, and the most directly comparable GAAP measure is net interest margin. MidWestOne believes that the presentation of net interest margin on a tax equivalent basis provides useful information to investors regarding its results of operations because it provides a more accurate representation of MidWestOne's actual net interest margin. A reconciliation of net interest margin is presented below.
- (d) As presented, the adjusted efficiency ratio is a non-GAAP financial measure. MidWestOne believes that the presentation of the adjusted efficiency ratio provides useful information to investors regarding its results of operations because it provides additional insights as to MidWestOne's current performance. A reconciliation is presented below.

The following tables provide a reconciliation of the non-GAAP measures to the most comparable GAAP equivalent, in each case as of the dates presented.

	As of and for the Nine Months Ended September 30,	
	2018	2017
(dollars in thousands)		
Net Interest Margin Tax Equivalent Adjustment		
Net interest income	\$ 79,255	\$ 77,764
Plus tax equivalent adjustment:(1)		
Loans	769	1,251
Investment securities	1,167	2,491
Tax equivalent net interest income(1)	\$ 81,191	\$ 81,506
Average interest-earning assets	\$ 2,988,193	\$ 2,831,864
Net Interest Margin (FTE)	3.64%	3.85%
Net Interest Margin	3.55%	3.67%
Operating Expense		
Total noninterest expense	\$ 63,700	\$ 60,043
Less: Amortization of intangibles	(1,793)	(2,412)
Operating expense	\$ 61,907	\$ 57,631
Operating Revenue		
Tax-equivalent net interest income(1)	\$ 81,191	\$ 81,506
Plus: Noninterest income	17,143	16,836
Less: Gain on sale or call of debt securities	(197)	(239)
Other (gain) loss	(338)	(66)
Operating Revenue	\$ 97,799	\$ 98,037
Efficiency Ratio, adjusted	63.30%	58.78%

Efficiency Ratio	66.08%	63.47%
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(1) Computed on a tax equivalent basis, assuming a federal income tax rate of 21% for 2018, and 35% for 2017.

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Unaudited Pro Forma Condensed Combined Financial Information

The following is the unaudited pro forma combined financial data for MidWestOne and ATBancorp, giving effect to the Merger. The unaudited pro forma combined balance sheet as of September 30, 2018 gives effect to the Merger as if it occurred on that date. The unaudited pro forma combined income statement for the year ended December 31, 2017 and for the nine months ended September 30, 2018 gives effect to the Merger as if it occurred as of the beginning of each period.

The unaudited pro forma combined financial statements have been prepared using the acquisition method of accounting for business combinations under accounting principles generally accepted in the United States of America ("GAAP"). MidWestOne is the acquirer for accounting purposes. Certain immaterial reclassifications have been made to the historical financial statements of ATBancorp to conform to the presentation in MidWestOne's financial statements.

A final determination of the fair values of ATBancorp's assets and liabilities, which cannot be made prior to the completion of the Merger, will be based on the actual net tangible and intangible assets of ATBancorp that exist as of the date of completion of the transaction. Consequently, fair value adjustments to assets acquired (including identifiable intangible assets) and liabilities assumed could change significantly from those in the unaudited pro forma combined financial statements presented herein and could result in a material change in amortization of acquired intangible assets. In addition, the value of the final purchase price of the Merger will be based on the closing price of MidWestOne's common stock immediately preceding the Closing Date. A closing price of MidWestOne common stock of \$33.31 was used for purposes of presenting the unaudited pro forma combined balance sheet at September 30, 2018.

In connection with the plan to integrate the operations of MidWestOne and ATBancorp following the completion of the Merger, MidWestOne anticipates that it will incur nonrecurring charges, such as costs associated with systems implementation, severance and other costs related to exit or disposal activities. MidWestOne is not able to determine the timing, nature and amount of these charges as of the date of this joint proxy statement/prospectus. However, these charges will affect the results of operations of MidWestOne and ATBancorp, as well as those of the combined company following the completion of the Merger, in the period in which they are recorded. The unaudited pro forma combined income statements do not include the effects of the non-recurring costs associated with any restructuring or integration activities resulting from the Merger, as they are nonrecurring in nature and not factually supportable at this time.

The Merger Agreement provides that ATBancorp may pay a special dividend of \$907.8452 per share to the ATBancorp shareholders at a time prior to the Closing determined by ATBancorp. Such dividend represents a portion of the proceeds to ATBancorp from the sale of Heritage Commerce Corp common stock received by ATBancorp as consideration in connection with the sale, completed on May 4, 2018, of United American Bank. ATBancorp shareholders are not required to take any action to approve or receive this special dividend. The payment of this special dividend by ATBancorp is in addition to the Merger consideration to be paid by MidWestOne. The unaudited pro forma combined financial statements reflect the special dividend of \$907.8452 per share that was distributed to ATBancorp shareholders on September 24, 2018. In addition, the unaudited pro forma combined financial statements reflect the removal of historical income and expense amounts recognized by ATBancorp from the operations of United American Bank.

The Merger Agreement also provides that, prior to Closing, ATBancorp dispose of an aircraft and the ATB Businesses; the assets and liabilities of the ATB Businesses consist primarily of customers, contracts and employees. ATBancorp may pay a special dividend to ATBancorp shareholders based on the net proceeds (if any) received by ATBancorp in connection with the disposition of the ATB Businesses, prior to Closing. ATBancorp shareholders are not required to take any action to approve or receive this special dividend. The payment of this special dividend by ATBancorp is in addition to the

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Merger consideration to be paid by MidWestOne. The unaudited pro forma combined financial statements reflect the removal of historical estimated amounts attributed to the ATB Businesses. The unaudited pro forma combined financial statements do not, however, include the special dividend to shareholders based on the net proceeds received in connection with the disposition of the ATB Businesses, as MidWestOne is not able to determine the amount of such dividend as of the date of this joint proxy statement/prospectus.

The actual amounts recorded as of the completion of the Merger may differ materially from the information presented in these unaudited pro forma combined financial statements as a result of, among other things:

changes in the trading price for MidWestOne's common stock;

capital used or generated in ATBancorp's operations between the signing of the Merger Agreement and completion of the Merger;

changes in ATBancorp's net assets that occur prior to the completion of the Merger;

changes in the fair values of ATBancorp's assets and liabilities; and

the actual financial results of the combined company.

The unaudited pro forma combined financial statements are provided for informational purposes only. The unaudited pro forma combined financial statements are not necessarily, and should not be assumed to be, an indication of the results that would have been achieved had the transaction been completed as of the dates indicated or that may be achieved in the future. The preparation of the unaudited pro forma combined financial statements and related adjustments required management to make certain assumptions and estimates. The unaudited pro forma combined financial information is based on, and should be read together with, the historical consolidated financial statements and related notes of MidWestOne incorporated into this document by reference from its Annual Report on Form 10-K for the year ended December 31, 2017 and its Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018, June 30, 2018, and September 30, 2018, ATBancorp's audited consolidated financial statements and accompanying notes as of and for the year ended December 31, 2017, ATBancorp's unaudited consolidated financial statements and accompanying notes as of and for the three and nine months ended March 31, 2018 and September 30, 2018 and ATBancorp's Management's Discussion and Analysis of Financial Condition and Results of Operations for the year ended December 31, 2017 and the three and nine months ended March 31, 2018 and September 30, 2018 included elsewhere in this joint proxy statement/prospectus.

The unaudited pro forma condensed combined balance sheet as of September 30, 2018 presents the consolidated financial position giving pro forma effect to the following transactions as if they had occurred as of September 30, 2018:

the completion of MidWestOne's acquisition of ATBancorp, including the issuance of 4,117,541 shares of MidWestOne's common stock; and

the redemption by ATBancorp of certain subordinated debentures, including any repayment fee and accrued interest, totaling approximately \$9.6 million.

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Unaudited Pro Forma Condensed Combined Balance Sheet as of September 30, 2018

	MidWestOne Historical	ATBancorp Historical	Pro Forma Adjustments	Notes	Pro Forma Combined
(in thousands)					
ASSETS					
Cash and cash equivalents	\$ 53,379	\$ 84,857	\$ (9,400)	A	\$ 128,836
Equity securities, at fair value	2,797				2,797
Debt securities available for sale, at fair value	407,766	102,009			509,775
Debt securities held to maturity, at amortized cost	191,733				191,733
Loans held for sale	1,124	1,687			2,811
Loans held for investment, net of unearned income	2,377,649	1,124,893	(19,123)	B	3,483,419
Less: allowance for loan and lease losses	31,278	12,587	(12,587)	C	31,278
Loans held for investment, net	2,346,371	1,112,306	(6,536)		3,452,141
Premises and equipment, net	76,497	17,451	9,600	D	103,548
Goodwill	64,654	3,253	41,950	F	109,857
Other intangible assets, net	10,378	699	12,404	G	23,481
Other real estate owned	549	3,577	(838)	E	3,288
Other assets	112,717	39,733	(5,165)	H	147,285
Total assets	\$ 3,267,965	\$ 1,365,572	\$ 42,015		\$ 4,675,552
LIABILITIES AND SHAREHOLDERS' EQUITY					
EQUITY					
Deposits	\$ 2,632,259	\$ 1,099,120			\$ 3,731,379
Federal funds purchased	19,056	700			19,756
Securities sold under agreements to repurchase	68,922	37,519			106,441
Other borrowed money	151,750	53,400	35,000	I	240,150
Subordinated debentures		20,435	(9,600)	J	10,835
Junior subordinated notes issued to capital trusts	23,865	19,500	(4,500)	K	38,865
Other liabilities	22,924	18,952	(94)	L	41,782
Total liabilities	2,918,776	1,249,626	20,806		4,189,208
Commitments and contingent liabilities					
Shareholders' equity:					
Common stock	12,463	1,764	2,354	M	16,581
Additional paid-in capital	187,581	4,852	128,185	N	320,618
Treasury stock	(5,474)	(585)	585	O	(5,474)
Retained earnings	163,709	112,204	(112,204)	P	163,709
Accumulated other comprehensive loss	(9,090)	(2,289)	2,289	Q	(9,090)
Total shareholders' equity	349,189	115,946	21,209		486,344
Total liabilities and shareholders' equity	\$ 3,267,965	\$ 1,365,572	\$ 42,015		\$ 4,675,552

See accompanying Notes to Unaudited Pro Forma Condensed Combined Financial Information.

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Unaudited Pro Forma Condensed Combined Statement of Income for the Year Ended December 31, 2017

	MidWestOne Historical	ATBancorp Historical	Pro Forma Merger Adjustments	Notes	Pro Forma Combined
(in thousands except per share amounts)					
Interest Income					
Loans	\$ 102,366	\$ 51,352	\$ (3,115)	R	\$ 150,603
Taxable securities	10,573	3,116	(1,257)	S	12,432
Tax-exempt securities	6,239	439			6,678
Other	142	647	(341)	T	448
Total interest income	119,320	55,554	(4,713)		170,161
Interest Expense					
Deposits	11,489	6,254	(753)	U	16,990
Subordinated debentures		1,357	(624)	V	733
Junior subordinated notes issued to capital trusts	949	582	225	W	1,756
Other borrowings	2,707	750	1,511	X	4,968
Total interest expense	15,145	8,943	359		24,447
Net Interest Income	104,175	46,611	(5,072)		145,714
Provision for (reversal of) loan losses	17,334	(1,320)	2,400	Y	18,414
Net interest income after provision for loan losses	86,841	47,931	(7,472)		127,300
Noninterest Income					
Trust, investment, and insurance fees	6,189	15,506	(11,684)	Z	10,011
Service charges and fees on deposit accounts	5,126	1,380	(84)	AA	6,422
Loan origination and servicing fees	3,421	3,401	(40)	BB	6,782
Other service charges and fees	5,992	3,417	(38)	CC	9,371
Investment securities gains, net	241				241
Other	1,401	1,459	(2,179)	DD	681
Total noninterest income	22,370	25,163	(14,025)		33,508
Noninterest Expense					
Salaries and employee benefits	47,864	31,501	(11,150)	EE	68,215
Net occupancy and equipment expense	12,305	6,696	(2,805)	FF	16,196
Professional fees	3,962	1,658	(568)	GG	5,052
Data processing expense	2,674	3,560	(821)	HH	5,413
FDIC insurance expense	1,265	491	(94)	II	1,662
Amortization of intangibles	3,125	67	2,315	JJ	5,507
Other	8,941	8,944	(3,031)	KK	14,854
Total noninterest expense	80,136	52,917	(16,154)		116,899
Income before income taxes	29,075	20,177	(5,343)		43,909
Income tax provision	10,376	6,809	(2,137)	LL	15,048
Net income before noncontrolling interest	18,699	13,368	(3,206)		28,861
Net income attributable to noncontrolling interest		(788)	788	MM	
Net income available to common shareholders	\$ 18,699	\$ 12,580	\$ (2,418)		\$ 28,861
Per Common Share					
Earnings basic	\$ 1.55	\$ 0.36			\$ 1.79

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Earnings diluted	\$	1.55	\$	0.36		\$	1.78
Weighted average number of common shares outstanding		12,038		35,070	(30,952)	NN	16,156
Weighted average number of diluted common shares outstanding		12,063		35,070	(30,952)	OO	16,181

See accompanying Notes to Unaudited Pro Forma Condensed Combined Financial Information.

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Unaudited Pro Forma Condensed Combined Statement of Income for the Nine Months Ended September 30, 2018

	MidWestOne Historical	ATBancorp Historical	Pro Forma Merger Adjustments	Notes	Pro Forma Combined
(in thousands except per share amounts)					
Interest Income					
Loans	\$ 82,141	\$ 37,905	\$ 1,800	R	\$ 121,846
Taxable securities	8,793	1,785	(394)	S	10,184
Tax-exempt securities	4,452	258			4,710
Other	39	976	(187)	T	828
Total interest income	95,425	40,924	1,219		137,568
Interest Expense					
Deposits	12,170	6,475	(302)	U	18,343
Subordinated debentures		574	(468)	V	106
Junior subordinated notes issued to capital trusts	878	996	169	W	2,043
Other borrowings	3,122	1,088	1,171	X	5,381
Total interest expense	16,170	9,133	570		25,873
Net Interest Income	79,255	31,791	649		111,695
Provision for loan losses	4,050	804			4,854
Net interest income after provision for loan losses	75,205	30,987	649		106,841
Noninterest Income					
Trust, investment, and insurance fees	4,703	13,454	(8,714)	Z	9,443
Service charges and fees on deposit accounts	3,474	893	(26)	AA	4,341
Loan origination and servicing fees	2,738	2,136	(14)	BB	4,860
Other service charges and fees	4,464	2,887	(13)	CC	7,338
Investment securities gains (losses), net	197	(1,136)			(939)
Other	1,567	24,515	(26,369)	DD	(287)
Total noninterest income	17,143	42,749	(35,136)		24,756
Noninterest Expense					
Salaries and employee benefits	37,647	22,199	(7,207)	EE	52,639
Net occupancy and equipment expense	10,440	4,600	(1,466)	FF	13,574
Professional fees	3,614	5,156	(1,508)	GG	7,262
Data processing expense	2,076	2,885	(614)	HH	4,347
FDIC insurance expense	1,104	410	(67)	II	1,447
Amortization of intangibles	1,793	50	1,737	JJ	3,580
Other	7,026	6,206	(3,248)	KK	9,984
Total noninterest expense	63,700	41,506	(12,373)		92,833
Income before income taxes	28,648	32,230	(22,114)		38,764
Income tax provision	5,921	8,790	(5,750)	LL	8,961
Net income before noncontrolling interest	22,727	23,440	(16,364)		29,803
Net income attributable to noncontrolling interest		447	(447)	MM	
Net income available to common shareholders	\$ 22,727	\$ 23,887	\$ (16,811)		\$ 29,803
Per Common Share					
Earnings basic	\$ 1.86	\$ 0.67			\$ 1.82

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Earnings diluted	\$	1.86	\$	0.67		\$	1.82
Weighted average number of common shares outstanding		12,221		35,028	(30,910)	NN	16,339
Weighted average number of diluted common shares outstanding		12,238		35,028	(30,910)	OO	16,356

See accompanying Notes to Unaudited Pro Forma Condensed Combined Financial Information.

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Notes to Unaudited Pro Forma Condensed Combined Financial Information

Note 1 Basis of Presentation

The unaudited pro forma condensed combined financial information has been prepared using the acquisition method of accounting giving effect to the Merger involving MidWestOne and ATBancorp. The unaudited pro forma condensed combined financial information is presented for illustrative purposes only and is not necessarily indicative of the financial position had the Merger been consummated at September 30, 2018 or the unaudited pro forma condensed combined income statements for the year ended December 31, 2017 and the nine months ended September 30, 2018, as if the Merger had occurred as of the beginning of each period, nor is it necessarily indicative of the results of operation in future periods or the future financial position of the combined entities. The merger, which is currently expected to be completed in the first quarter of 2019, provides for the issuance of 4,117,541 shares of MidWestOne common stock and \$34.8 million in cash. The value of an ATBancorp share would be \$4,908.10 based upon a closing price of MidWestOne common stock of \$33.31.

Under the acquisition method of accounting, the assets and liabilities of ATBancorp will be recorded at the respective fair values on the Merger date. The fair value on the Merger date represents management's best estimates based on available information and facts and circumstances in existence on the Merger date. The pro forma allocation of purchase price reflected in the unaudited pro forma condensed combined financial information is subject to adjustment and may vary from the actual purchase price allocation that will be recorded at the time the Merger is completed. Adjustments may include, but not be limited to, changes in (i) ATBancorp's balance sheet through the Effective Time; (ii) the aggregate value of Merger consideration paid if the price of MidWestOne's stock varies from the assumed \$33.31 per share; (iii) total Merger related expenses if consummation and/or implementation costs vary from currently estimated amounts; and (iv) the underlying values of assets and liabilities if market conditions differ from current assumptions.

The accounting policies of both MidWestOne and ATBancorp are in the process of being reviewed in detail. Upon completion of such review, conforming adjustments or financial statement reclassification may be determined.

Note 2 Estimated Merger and Integration Costs

In connection with the Merger, the plan to integrate MidWestOne's and ATBancorp's operations is still being developed. Over the next several months, the specific details of these plans will continue to be refined. MidWestOne and ATBancorp are currently in the process of assessing the two companies' personnel, benefit plans, premises, equipment, computer systems, supply chain methodologies, and service contracts to determine where they may take advantage of redundancies or where it will be beneficial or necessary to convert to one system. Certain decisions arising from these assessments may involve involuntary termination of ATBancorp's employees, vacating ATBancorp's leased premises, changing information systems, canceling contracts between ATBancorp and certain service providers and selling or otherwise disposing of certain premises, furniture and equipment owned by ATBancorp. Additionally, as part of our formulation of the integration plan, certain actions regarding existing MidWestOne information systems, premises, equipment, benefit plans, supply chain methodologies, supplier contracts, and involuntary termination of personnel may be taken. MidWestOne expects to incur Merger-related expenses including system conversion costs, employee retention and severance agreements, communications to customers, and others. To the extent there are costs associated with these actions, the costs will be recorded based on the nature and timing of these integration actions. Most acquisition and restructuring costs are recognized separately from a business combination and generally will be expensed as incurred. We estimated the Merger related costs to be approximately \$20.2 million and expect they will be incurred primarily in 2019.

Table of Contents**Note 3 Estimated Annual Cost Savings**

Following the Merger, MidWestOne expects to realize cost savings equal to approximately 30% of ATBancorp's pre-tax noninterest expense. Management expects such cost savings to be phased-in over a two-year period, but there is no assurance that the anticipated cost savings will be realized on the anticipated time schedule or at all. These cost savings are not reflected in the presented pro forma financial information.

Note 4 Pro Forma Adjustments

The following pro forma adjustments have been reflected in the unaudited pro forma condensed combined financial information. All taxable balance sheet adjustments were calculated using a combined 26% tax rate to arrive at deferred tax asset or liability adjustments. All adjustments are based on current assumptions and valuations, which are subject to change.

Balance Sheet (dollars in thousands)**A.**

Adjustments to cash and cash equivalents

To reflect cash used by ATBancorp to redeem certain subordinated debt	\$ (9,600)
To reflect excess cash proceeds from MidWestOne senior debt	200
	\$ (9,400)

B.

Adjustment to loans, net of unearned income

To reflect estimated fair value at closing date, calculated as 1.7% of the ATBancorp loan balance.	\$ (19,123)
--	-------------

C.

Adjustment to allowance for loan and lease losses

To remove ATBancorp allowance at Merger date as the credit risk is contemplated in the estimated fair value in adjustment B above.	\$ (12,587)
--	-------------

D.

Adjustment to premises and equipment

To reflect estimated fair value of ATBancorp properties at Merger date. The estimated useful life of these properties is 39 years.	\$ 9,600
--	----------

E.

Adjustment to other real estate owned

To reflect estimated fair value of ATBancorp other real estate owned at Merger date based on MidWestOne's estimate of property values given current market conditions and additional discounts necessary to liquidate these properties.	\$ (838)
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F.

Adjustment to goodwill

To reverse ATBancorp goodwill on the books.	\$ (3,253)
To reflect the goodwill associated with the Merger.	45,203
	\$ 41,950

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G.

Adjustment to core deposit intangible ("CDI"), net

To reverse ATBancorp CDI on the books.	\$	(699)
To record the estimated fair value of acquired identifiable intangible assets, calculated as 1.5% of ATBancorp core deposits. Core deposits were identified as the demand, savings and money market accounts. The acquired core deposit intangible will be amortized over 10 years using a sum-of-the-years-digits method.		
		13,103
	\$	12,404

H.

Adjustment to other assets

Net deferred tax liability, calculated as follows:

Adjustment to loans held for investment, net of unearned income	\$	(19,123)
Adjustment to allowance for loan and lease losses		12,587
Adjustment to CDI, net		12,404
Adjustment to premises and equipment		9,600
Adjustment to other real estate owned		(838)
Adjustment to junior subordinated notes issued to capital trusts		4,500
Subtotal for fair value adjustments		19,130
Calculated net deferred tax liability at MidWestOne's estimated combined rate of 26%		(4,974)
Elimination of historical other assets from the ATB Businesses.		(191)
	\$	(5,165)

I.

Adjustment to long-term debt

To reflect proceeds from senior debt incurred by MidWestOne to fund cash portion of Merger consideration.	\$	35,000
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J.

Adjustment to subordinated debentures

To reflect cash redemption by ATBancorp of certain subordinated debentures.	\$	(9,600)
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K.

Adjustment to junior subordinated debentures

To reflect valuation mark on junior subordinated notes issued to capital trusts.	\$	(4,500)
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L.

Adjustment to other liabilities

Elimination of historical other liabilities from the ATB Businesses.	\$	(94)
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M.

Adjustments to common stock

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To eliminate historical ATBancorp common stock.	\$ (1,764)
To reflect the issuance of MidWestOne common stock to ATBancorp shareholders.	4,118
	\$ 2,354

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N.

Adjustments to additional paid-in capital

To eliminate historical ATBancorp additional paid-in capital.	\$ (4,852)
To reflect the issuance of MidWestOne common stock to ATBancorp shareholders.	133,037
	\$ 128,185

O.

Adjustment to treasury stock

To eliminate historical ATBancorp treasury stock	\$ 585
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P.

Adjustment to retained earnings

To eliminate historical ATBancorp retained earnings	\$ (112,204)
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Q.

Adjustment to accumulated other comprehensive income

To eliminate historical ATBancorp accumulated other comprehensive income.	\$ 2,289
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Income Statement

(dollars and shares in thousands)

	Nine Months Ended September 30, 2018	Year Ended December 31, 2017
R. Adjustment to loan interest income		
To reflect accretion of loan discount resulting from loan fair value pro forma adjustment based on weighted average remaining life of five years.	\$ 4,781	\$ 6,374
To eliminate historical income from ATBancorp's United American Bank subsidiary, which was sold on May 4, 2018.	(2,981)	(9,489)
	\$ 1,800	\$ (3,115)
S. Adjustment to taxable securities interest income		
To eliminate historical income from ATBancorp's United American Bank subsidiary, which was sold on May 4, 2018.	\$ (394)	\$ (1,257)
T. Adjustment to other interest income		
To eliminate historical income from ATBancorp's United American Bank subsidiary, which was sold on May 4, 2018.	\$ (187)	\$ (341)
U. Adjustment to deposit interest expense		
To eliminate historical expense from ATBancorp's United American Bank subsidiary, which was sold on May 4, 2018.	\$ (302)	\$ (753)

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	Nine Months Ended September 30, 2018	Year Ended December 31, 2017
V.	Adjustment to subordinated debentures interest expense	
	Elimination of historical ATBancorp interest on subordinated debentures paid with interest calculated using an interest rate of 6.50%	
	(468)	(624)
W.	Adjustment to junior subordinated notes issued to capital trusts interest expense	
	To reflect additional interest expense resulting from the amortization of the merger valuation mark on ATBancorp's junior subordinated notes.	
	\$ 169	\$ 225
X.	Adjustment to other debt interest expense	
	To reflect additional interest expense resulting from the issuance of \$35.0 million of new senior debt, at an estimated annual interest rate of 4.625%.	
	\$ 1,171	\$ 1,532
	To eliminate historical expense from ATBancorp's United American Bank subsidiary, which was sold on May 4, 2018.	
		(21)
	\$ 1,171	\$ 1,511
Y.	Adjustment to reversal of loan and lease losses provision	
	To eliminate historical provision expense recapture from ATBancorp's United American Bank subsidiary, which was sold on May 4, 2018.	
	\$	\$ 2,400
Z.	Adjustment to trust, investment and insurance fees	
	To eliminate estimated historical income from the ATB Businesses.	
	\$ (8,714)	\$ (11,618)
	To eliminate historical income from ATBancorp's United American Bank subsidiary, which was sold on May 4, 2018.	
		(66)
	\$ (8,714)	\$ (11,684)
AA.	Adjustment to service charges and fees on deposit accounts	
	To eliminate historical income from ATBancorp's United American Bank subsidiary, which was sold on May 4, 2018.	
	\$ (26)	\$ (84)
BB.	Adjustment to loan origination and servicing fees	
	To eliminate historical income from ATBancorp's United American Bank subsidiary, which was sold on May 4, 2018.	
	\$ (14)	\$ (40)
CC.	Adjustment to other service charges and fees	
	To eliminate historical income from ATBancorp's United American Bank subsidiary, which was sold on May 4, 2018.	
	\$ (13)	\$ (38)

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	Nine Months Ended September 30, 2018	Year Ended December 31, 2017
DD. Adjustment to other noninterest income		
To eliminate historical income from ATBancorps' United American Bank subsidiary, which was sold on May 4, 2018.	\$ (1)	\$ (797)
To eliminate estimated historical income from the ATB Businesses.	(1,037)	(1,382)
To eliminate historical gain on sale from ATBancorp's sale of United American Bank subsidiary, which was sold on May 4, 2018, to be paid out as part of a special dividend prior to merger consummation.	(25,331)	
	\$ (26,369)	\$ (2,179)
EE. Adjustment to salaries and employee benefits expense		
To eliminate historical expense from ATBancorps' United American Bank subsidiary, which was sold on May 4, 2018.	\$ (2,525)	\$ (4,908)
To eliminate estimated historical expense from the ATB Businesses.	(4,682)	(6,242)
	\$ (7,207)	\$ (11,150)
FF. Adjustment to occupancy expense		
To reflect additional depreciation expense resulting from premises and equipment pro forma adjustment based on estimated useful life of 39 years using the straight line method.	\$ 185	\$ 246
To eliminate estimated historical expense from the ATB Businesses.	(806)	(1,074)
To eliminate historical expense from ATBancorps' United American Bank subsidiary, which was sold on May 4, 2018.	(845)	(1,977)
	\$ (1,466)	\$ (2,805)
GG. Adjustment to professional fees expense		
To eliminate historical expense from ATBancorps' United American Bank subsidiary, which was sold on May 4, 2018.	\$ (1,508)	\$ (568)
HH. Adjustment to data processing expense		
To eliminate estimated historical expense from the ATB Businesses.	(608)	(810)
To eliminate historical expense from ATBancorps' United American Bank subsidiary, which was sold on May 4, 2018.	(6)	(11)
	\$ (614)	\$ (821)
II. Adjustment to FDIC insurance expense		
To eliminate historical expense from ATBancorps' United American Bank subsidiary, which was sold on May 4, 2018.	\$ (67)	\$ (94)
JJ. Adjustment to amortization of intangibles		
To reflect amortization of acquired intangible assets based on amortization period of 10 years and using the sum-of-the-years-digits method of amortization.	\$ 1,787	\$ 2,382
To eliminate historical CDI amortization at ATBancorp	(50)	(67)
	\$ 1,737	\$ 2,315

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	Nine Months Ended September 30, 2018	Year Ended December 31, 2017
KK. Adjustment to other expense		
To eliminate estimated historical expense from the ATB Businesses.	\$ (1,629)	\$ (2,172)
To eliminate historical expense from ATBancorp's United American Bank subsidiary, which was sold on May 4, 2018.	(1,619)	(859)
	\$ (3,248)	\$ (3,031)
LL. Adjustment to income tax provision		
To reflect the income tax effect of pro forma adjustments R JJ at MidWestOne's estimated combined tax rate of 26% for 2018 and 40% for 2017.	\$ (5,750)	\$ (2,137)
MM. Adjustment to net income attributable to noncontrolling interests		
To eliminate historical net income attributable to noncontrolling interests stemming from ATBancorp's United American Bank subsidiary.	\$ (447)	\$ 788
NN. Adjustment to weighted average number of common shares outstanding		
	(30,910)	(30,952)
Adjustment to the year ended December 31, 2017 and the nine months ended September 30, 2018 calculated as follows:		
Removal of ATBancorp weighted average number of common shares outstanding for the year ended December 31, 2017 and the nine months ended September 30, 2018	(35,028)	(35,070)
MidWestOne shares issued to ATBancorp shareholders	4,118	4,118
Adjustment to weighted average number of common shares outstanding for the year ended December 31, 2017 and the nine months ended September 30, 2018	(30,910)	(30,952)
OO. Adjustment to weighted average number of diluted common shares outstanding		
	(30,910)	(30,952)
Adjustment to the year ended December 31, 2017 and the six nine months ended September 30, 2018 calculated as follows:		
Removal of ATBancorp weighted average number of diluted common shares outstanding for the year ended December 31, 2017 and the nine months ended September 30, 2018	(35,028)	(35,070)
MidWestOne shares issued to ATBancorp shareholders	4,118	4,118
Adjustment to weighted average number of diluted common shares outstanding for the year ended December 31, 2017 and the nine months ended September 30, 2018	(30,910)	(30,952)

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The table below presents the pro forma Merger consideration to be transferred by *MidWestOne*, the estimated fair value of assets acquired (including identifiable intangible assets) and liabilities assumed from *ATBancorp*, and the goodwill created by the Merger at the date indicated.

	September 30, 2018 (in thousands)
Consideration Transferred:	
MidWestOne common stock issued	\$ 137,155
Cash paid	34,800
 Total consideration transferred	 \$ 171,955
 Assets Acquired:	
Cash and cash equivalents	\$ 75,257
Debt securities available for sale	102,009
Loans held for sale	1,687
Loans held for investment	1,105,770
Premises and equipment	27,051
Core deposit intangible	13,103
Other real estate owned	2,739
Other assets	34,568
 Total assets acquired	 \$ 1,362,184
 Liabilities Assumed:	
Deposits	\$ 1,099,120
Borrowings	91,619
Subordinated debentures	10,835
Junior subordinated notes issued to capital trusts	15,000
Other liabilities	18,858
 Total liabilities assumed	 \$ 1,235,432
 Net assets acquired	 \$ 126,752
 Goodwill	 \$ 45,203

Comparative Historical and Unaudited Pro Forma Per Share Financial Data

The following table presents: (i) historical per share information for *MidWestOne*; (ii) historical per share information for *ATBancorp*; (iii) pro forma per share information of the combined company after giving effect to the Merger; and (iv) equivalent pro forma per share information for *ATBancorp*.

The combined company pro forma per share information was derived by combining information from the historical financial information presented above under " Selected Historical Consolidated Financial Data of *MidWestOne*" and " Unaudited Pro Forma Combined Financial Information." You should read this table together with the financial information discussed under those headings and the consolidated financial statements of *MidWestOne* incorporated by reference in this joint proxy statement/prospectus and the consolidated financial statements of *ATBancorp* included with this joint proxy statement/prospectus. You should not rely on the pro forma per share information as being necessarily

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indicative of actual results had the Merger been effective on January 1, 2017, for purposes of net income per share data, or September 30, 2018, for purposes of book value per share data.

The information appearing in the column captioned "Combined Pro Forma" in the table below was prepared assuming that 4,117,541 shares of *MidWestOne* common stock were issued to the

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shareholders of ATBancorp in the Merger and that the Merger was completed as of January 1, 2017, for purposes of net income per share data, and September 30, 2018, for purposes of book value per share data.

(unaudited)	MidWestOne	ATBancorp	Combined Pro Forma	Per Equivalent ATBancorp Share
Book value per share				
As of December 31, 2017	\$ 27.85	\$ 3,847.11	\$ 29.34	\$ 3,449.05
As of September 30, 2018	\$ 28.57	\$ 3,310.09	\$ 29.77	\$ 3,449.05
Cash dividends				
For the year ended December 31, 2017	\$ 0.67	\$ 90.00	\$ 0.67	\$ 78.76
For the nine months ended September 30, 2018	\$ 0.585	\$ 67.50*	\$ 0.585	\$ 68.77
Basic income (loss) from continuing operations				
For the year ended December 31, 2017	\$ 1.55	\$ 0.36	\$ 1.79	\$ 210.41
For the nine months ended September 30, 2018	\$ 1.86	\$ 0.67	\$ 1.82	\$ 213.94
Diluted income (loss) from continuing operations				
For the year ended December 31, 2017	\$ 1.55	\$ 0.36	\$ 1.78	\$ 209.24
For the nine months ended September 30, 2018	\$ 1.86	\$ 0.67	\$ 1.82	\$ 213.94

*

Does not include a special dividend of \$907.8452 per share that was distributed to ATBancorp shareholders on September 24, 2018. Such dividend represents a portion of the proceeds to ATBancorp from the sale of Heritage Commerce Corp common stock received by ATBancorp as consideration in connection with the sale, completed on May 4, 2018, of United American Bank.

Per Share Market Price Information

The following table presents (i) the closing sale price of MidWestOne common stock as reported on the NASDAQ Global Select Market on August 21, 2018, the last trading day before the date of the public announcement of the Merger Agreement, and November 26, 2018, the last practicable trading day preceding the date of this joint proxy statement/prospectus; and (ii) the equivalent pro forma value of a share of ATBancorp common stock at such dates based on the value of the consideration to be received in the Merger with respect to each share. Historical market value information regarding ATBancorp common stock is not provided because there is no active market for ATBancorp common stock.

	MidWestOne Common Stock Closing Price	Equivalent Market Value per Share of ATBancorp Common Stock
August 21, 2018	\$ 33.25	\$ 4,901.05
November 26, 2018	\$ 28.98	\$ 4,399.11

The market price of MidWestOne common stock will fluctuate between now and completion of the Merger. You should obtain a current price quotation for MidWestOne common stock.

Stock Price and Dividend Information

MidWestOne common stock trades on the NASDAQ Global Select Market under the symbol "MOFG." The following table sets forth the reported high and low sales prices of shares of

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MidWestOne common stock, and the quarterly cash dividends per share of MidWestOne common stock declared, in each case for the periods indicated.

Year/Quarter:	High	Low	Cash Dividends Declared
2018			
Fourth quarter(1)	\$ 34.83	\$ 28.22	\$ 0.195
Third quarter	35.20	31.92	0.195
Second quarter	34.75	31.94	0.195
First quarter	34.99	30.70	0.195
2017			
Fourth quarter	\$ 37.94	\$ 30.56	\$ 0.17
Third quarter	35.63	31.93	0.17
Second quarter	36.72	32.92	0.165
First quarter	38.56	33.25	0.165
2016			
Fourth quarter	\$ 39.20	\$ 27.93	\$ 0.16
Third quarter	30.74	26.50	0.16
Second quarter	30.50	25.49	0.16
First quarter	30.04	24.71	0.16

(1) Through November 26, 2018, the last practicable trading day preceding the date of this joint proxy statement/prospectus.

There is no established public trading market for shares of ATBancorp common stock. The last reported sale price of ATBancorp common stock before the date of the public announcement of the Merger Agreement on August 22, 2018, and prior to the printing of this joint proxy statement/prospectus occurred on May 16, 2018 at \$3,500.00 per share. The following table sets forth for the periods indicated, dividends per share of ATBancorp common stock.

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Dividends

Year/Quarter:	
2018	
Fourth quarter(1)	\$
Third quarter	22.50(2)
Second quarter	22.50
First quarter	22.50
2017	
Fourth quarter	\$ 35.00
Third quarter	20.00
Second quarter	20.00
First quarter	15.00
2016	
Fourth quarter	\$ 22.00
Third quarter	10.00
Second quarter	10.00
First quarter	10.00

(1) Through November 26, 2018, the last practicable trading day preceding the date of this joint proxy statement/prospectus.

(2) ATBancorp also paid a special dividend to its shareholders of \$907.8452 per share on September 24, 2018, representing a portion of the proceeds to ATBancorp from the sale of Heritage Commerce Corp common stock received as consideration in connection with the sale of United American Bank, as provided in the Merger Agreement.

As of the MidWestOne record date, the outstanding shares of MidWestOne common stock were owned by approximately 425 record owners. As of the ATBancorp record date, the outstanding shares of ATBancorp common stock were owned by approximately 18 record owners.

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RISK FACTORS

In addition to the other information contained in or incorporated by reference into this document, including the matters addressed under the caption entitled "Cautionary Statement Regarding Forward-Looking Statements," ATBancorp and MidWestOne shareholders should carefully consider the following factors in deciding whether to vote for each company's respective proposals. Please see the sections entitled "Where You Can Find More Information" in the forepart of this document and "Incorporation of Certain Documents by Reference" beginning on page 189.

Risks Related to the Merger

Because the market price of MidWestOne common stock will fluctuate, the value of the Merger consideration to be received by ATBancorp shareholders may change.

Upon completion of the Merger, each outstanding share of ATBancorp common stock, excluding Cancelled Shares and Dissenters' Shares, will be converted into the Per Share Stock Consideration and Per Share Cash Consideration pursuant to the terms of the Merger Agreement. The closing price of MidWestOne common stock on the date that the Merger is completed may vary from the closing price of MidWestOne common stock on the date MidWestOne and ATBancorp announced the Merger, on the date that this document is being mailed to MidWestOne and ATBancorp shareholders, and on the dates of the special meetings of MidWestOne and ATBancorp shareholders. Because the stock component of the Merger consideration is determined by a fixed exchange ratio, at the time of the ATBancorp special meeting, ATBancorp shareholders will not know or be able to calculate the value of the MidWestOne common stock they will receive upon completion of the Merger. Any change in the market price of MidWestOne common stock prior to completion of the Merger may affect the value of the stock component of the Merger consideration that ATBancorp shareholders will receive upon completion of the Merger. Stock price changes may result from a variety of factors, including general market and economic conditions, changes in our respective businesses, operations and prospects, and regulatory considerations, among other things. Many of these factors are beyond the control of MidWestOne and ATBancorp. ATBancorp shareholders should obtain current market quotations for shares of MidWestOne common stock before voting their shares at the ATBancorp special meeting.

MidWestOne and ATBancorp shareholders will have a reduced ownership and voting interest after the Merger and will exercise less influence over management.

MidWestOne shareholders currently have the right to vote in the election of the board of directors of MidWestOne and on other matters affecting MidWestOne. ATBancorp shareholders currently have the right to vote in the election of the board of directors of ATBancorp and on other matters affecting ATBancorp. Upon the completion of the Merger, each party's shareholders will be shareholders of MidWestOne with a percentage ownership of MidWestOne that is smaller than their current percentage ownership of MidWestOne or ATBancorp, as applicable. It is currently expected that the former shareholders of ATBancorp as a group will receive shares in the Merger constituting approximately 25.2% of the outstanding shares of the combined company's common stock immediately after the Merger. As a result, current shareholders of MidWestOne as a group will own approximately 74.8% of the outstanding shares of the combined company's common stock immediately after the Merger. Because of this, ATBancorp and MidWestOne shareholders will have less influence on the management and policies of the combined company than they now have on the management and policies of MidWestOne or ATBancorp, as applicable.

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Sales of substantial amounts of MidWestOne's common stock in the open market by former ATBancorp shareholders could depress MidWestOne's stock price.

Shares of MidWestOne common stock that are issued to shareholders of ATBancorp in the Merger will, except for those shares subject to a Lock-Up Agreement and for persons deemed to be affiliates of MidWestOne, be freely tradable without restrictions or further registration under the Securities Act. As of the MidWestOne record date, MidWestOne had approximately 12,222,145 shares of common stock entitled to vote outstanding and 445,100 shares of MidWestOne common stock were reserved for issuance under the MidWestOne Financial Group, Inc. 2017 Equity Incentive Plan. MidWestOne currently expects to issue approximately 4,117,541 shares of its common stock in connection with the Merger, of which approximately 2,514,855 shares will be subject to the Lock-Up Agreements.

If the Merger is completed and if ATBancorp's former shareholders sell substantial amounts of MidWestOne common stock in the public market following completion of the Merger, the market price of MidWestOne common stock may decrease. These sales might also make it more difficult for MidWestOne to sell equity or equity-related securities at a time and price that it otherwise would deem appropriate.

The combined company may fail to realize the anticipated benefits of the Merger.

The success of the Merger will depend on, among other things, the combined company's ability to combine the businesses of MidWestOne and ATBancorp. If the combined company is not able to successfully achieve this objective, the anticipated benefits of the Merger may not be fully realized, may not be realized at all or may take longer to realize than expected.

It is possible that the integration of MidWestOne's and ATBancorp's businesses or other factors could result in the loss or departure of key employees, the disruption of the ongoing business of MidWestOne or ATBancorp or inconsistencies in standards, controls, procedures and policies. It is also possible that customers, depositors and counterparties of MidWestOne or ATBancorp could choose to discontinue their relationships with the combined company post-Merger because they prefer doing business with an independent company or for any other reason, which would adversely affect the future performance of the combined company. These transition matters could have an adverse effect on each of MidWestOne and ATBancorp during the pre-Merger period and for an undetermined amount of time after the consummation of the Merger.

Failure of the Merger to be completed, the termination of the Merger Agreement or a significant delay in the consummation of the Merger could negatively impact MidWestOne and ATBancorp.

The Merger Agreement is subject to a number of conditions which must be fulfilled in order to complete the Merger. MidWestOne and ATBancorp have agreed to use their respective reasonable best efforts to obtain all necessary regulatory approvals for the Merger. Notwithstanding this agreement, it is a condition to MidWestOne's and ATBancorp's respective obligations to consummate the Merger that no such requisite regulatory approval shall have imposed a restriction or condition on, or requirement of, such approval that would, after the Effective Time, reasonably be expected by the board of directors of MidWestOne to materially restrict or burden, or impair in any material respect the benefits of the contemplated transactions to, or require a materially burdensome modification of, the businesses, activities, governance, legal structure, capital structure, compensation or fee arrangements of MidWestOne or its subsidiaries. Moreover, it is a condition to MidWestOne's obligation to consummate the Merger that ATBancorp successfully dispose of the ATB Businesses, which requires ATBancorp to engage in a sale process concurrently with, yet separate and apart from, the Merger.

These conditions to the consummation of the Merger may not be fulfilled and, accordingly, the Merger may not be completed. In addition, if the Merger is not completed by June 30, 2019, either

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MidWestOne or ATBancorp may choose not to proceed with the Merger, and the parties can mutually decide to terminate the Merger Agreement at any time, before or after shareholder approval.

If the Merger is delayed or not consummated, the ongoing business, financial condition and results of operations of each party may be materially adversely affected and the market price or value of each party's common stock may decline significantly, particularly to the extent that the current market price reflects a market assumption that the Merger will be consummated.

In addition, each party has incurred and will incur substantial expenses in connection with the negotiation and completion of the transactions contemplated by the Merger Agreement. If the Merger is not completed, the parties would have to recognize these expenses without realizing the expected benefits of the Merger. Any of the foregoing, or other risks arising in connection with the failure of or delay in consummating the Merger, including the diversion of management attention from pursuing other opportunities and the constraints in the Merger Agreement on the ability to make significant changes to each party's ongoing business during the pendency of the Merger, could have a material adverse effect on each party's business, financial condition and results of operations.

Additionally, MidWestOne's or ATBancorp's business may have been adversely impacted by the failure to pursue other beneficial opportunities due to the focus of management on the Merger, without realizing any of the anticipated benefits of completing the Merger, and the market price or value of MidWestOne common stock might decline, particularly to the extent that the current market price reflects a market assumption that the Merger will be completed. If the Merger Agreement is terminated and a party's board of directors seeks another merger or business combination, such party's shareholders cannot be certain that such party will be able to find a party willing to engage in a transaction on more attractive terms than the Merger.

If MidWestOne fails to successfully integrate ATBancorp into its internal control over financial reporting or if the internal control of ATBancorp over financial reporting were found to be ineffective, the integrity of MidWestOne's financial reporting could be compromised which could result in a material adverse effect on MidWestOne's reported financial results or in the determination of the effectiveness of MidWestOne's internal controls over financial reporting.

As a private company, ATBancorp has not been subject to the requirements of the Exchange Act with respect to internal control over financial reporting. The integration of ATBancorp into MidWestOne's internal control over financial reporting will require significant time and resources from management and other personnel and will increase compliance costs. If MidWestOne fails to successfully integrate the operations of ATBancorp into its internal control over financial reporting, MidWestOne's internal control over financial reporting may not be effective. Failure to achieve and maintain an effective internal control environment could have a material adverse effect on MidWestOne's ability to accurately report its financial results and the market's perception of its business and its stock price.

MidWestOne and ATBancorp will be subject to business uncertainties and contractual restrictions while the Merger is pending.

Uncertainty about the effect of the Merger on employees, customers and vendors may have an adverse effect on the business, financial condition and results of operations of ATBancorp and MidWestOne. These uncertainties may impair MidWestOne's or ATBancorp's ability to attract, retain and motivate key personnel, depositors and borrowers pending the consummation of the Merger, as such personnel, depositors and borrowers may experience uncertainty about their future roles following the consummation of the Merger. Additionally, these uncertainties could cause customers (including depositors and borrowers), suppliers, vendors and others who deal with MidWestOne or ATBancorp to seek to change existing business relationships with them or fail to extend an existing relationship with

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MidWestOne or ATBancorp. In addition, competitors may target each party's existing customers by highlighting potential uncertainties and integration difficulties that may result from the Merger.

MidWestOne and ATBancorp each have a small number of key personnel. The pursuit of the Merger and the preparation for the integration may place a burden on each company's management and internal resources. Any significant diversion of management attention away from ongoing business concerns and any difficulties encountered in the transition and integration process could have a material adverse effect on each company's business, financial condition and results of operations.

In addition, the Merger Agreement restricts ATBancorp from taking certain actions without MidWestOne's consent while the Merger is pending. These restrictions may, among other matters, prevent ATBancorp from pursuing otherwise attractive business opportunities, selling assets (except those described in the Merger Agreement), incurring indebtedness, engaging in significant capital expenditures in excess of certain limits set forth in the Merger Agreement, entering into other transactions or making other changes to its business prior to consummation of the Merger or termination of the Merger Agreement. These restrictions could have a material adverse effect on ATBancorp's business, financial condition and results of operations. Please see the section entitled "The Merger Agreement Conduct of Business Prior to the Completion of the Merger" beginning on page 118 for a description of the restrictive covenants applicable to ATBancorp.

ATBancorp's directors and officers have interests in the Merger different from the interests of other ATBancorp shareholders.

ATBancorp's executive officers and directors have interests in the Merger that are different from, or in addition to, the interests of ATBancorp's shareholders generally. Such interests include change in control agreements, deferred compensation agreements and salary continuation agreements with certain executive officers and the right to indemnification and insurance coverage following the consummation of the Merger. The members of the ATBancorp board of directors were aware of and considered these interests, among other matters, when they approved the Merger Agreement and recommended that ATBancorp shareholders approve the ATBancorp merger proposal. These interests are described in more detail under the section entitled "The Merger Interests of ATBancorp Directors and Executive Officers in the Merger" beginning on page 102.

Shares of MidWestOne common stock to be received by ATBancorp shareholders as a result of the Merger will have rights different from the shares of ATBancorp common stock.

Upon completion of the Merger, the rights of former ATBancorp shareholders will be governed by the articles of incorporation and bylaws of MidWestOne. The rights associated with ATBancorp common stock are different from the rights associated with MidWestOne common stock. Please see the section entitled "Comparison of Shareholders' Rights" beginning on page 134 for a summary of the different rights associated with MidWestOne common stock.

The Merger Agreement contains provisions that may discourage other companies from trying to acquire ATBancorp.

The Merger Agreement contains provisions that may discourage a third party from submitting a business combination proposal to ATBancorp that might result in greater value to ATBancorp's shareholders than that provided pursuant to the Merger. These provisions include a general prohibition on ATBancorp from soliciting or providing information to any third party regarding any acquisition proposal or offers for competing transactions, subject to certain exceptions set forth in the Merger Agreement. Further, the Voting Agreement requires that the shareholders party thereto vote all of their shares of ATBancorp common stock in favor of the Merger and against alternative acquisition proposals. The shareholders that are party to the voting agreements described in this paragraph

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beneficially own in the aggregate 62.41% of the outstanding shares of ATBancorp common stock as of the ATBancorp record date. For further information, please see "The Merger Agreement Voting Agreement" beginning on page 127. Each party also has an obligation to submit its respective proposals to a vote by its shareholders.

Combining the two companies may be more difficult, costly or time consuming than expected and the anticipated benefits and cost savings of the Merger may not be realized.

MidWestOne and ATBancorp have operated and, until the completion of the Merger, will continue to operate, independently. The success of the Merger, including anticipated benefits and cost savings, will depend, in part, on the successful combination of the businesses of MidWestOne and ATBancorp. To realize these anticipated benefits and cost savings, after the completion of the Merger, MidWestOne expects to integrate ATBancorp's business into its own. It is possible that the integration process could result in the loss of key employees, the disruption of each company's ongoing businesses or inconsistencies in standards, controls, procedures and policies that adversely affect the combined company's ability to maintain relationships with clients, customers, depositors and employees or to achieve the anticipated benefits and cost savings of the Merger. The loss of key employees could have an adverse effect on the companies' financial results and the value of their common stock. If MidWestOne experiences difficulties with the integration process, the anticipated benefits of the Merger may not be realized fully or at all, or may take longer to realize than expected.

The combined company expects to incur substantial expenses related to the Merger.

The combined company expects to incur substantial expenses in connection with consummation of the Merger and combining the business, operations, networks, systems, technologies, policies and procedures of the two companies. Although MidWestOne and ATBancorp have assumed that each party would incur a certain level of transaction and combination expenses, there are a number of factors beyond their control that could affect the total amount or the timing of their transaction combination expenses. Many of the expenses that will be incurred, by their nature, are difficult to estimate accurately at the present time. Due to these factors, the transaction and combination expenses associated with the Merger could, particularly in the near term, exceed the savings that the combined company expects to achieve from the elimination of duplicative expenses and the realization of economies of scale and cost savings related to the combination of the businesses following the consummation of the Merger. As a result of these expenses, both MidWestOne and ATBancorp could take charges against their earnings before and after the completion of the Merger. Such charges taken in connection with the Merger could be significant, although the aggregate amount and timing of any such charges are uncertain at present.

The unaudited pro forma combined condensed consolidated financial information included in this document is illustrative only and the actual financial condition and results of operations after the Merger may differ materially.

The unaudited pro forma combined condensed consolidated financial information in this document is presented for illustrative purposes only and is not necessarily indicative of what MidWestOne's actual financial condition or results of operations would have been had the Merger been completed on the dates indicated. The pro forma combined condensed consolidated financial information reflects adjustments, which are based upon preliminary estimates, to record the ATBancorp identifiable tangible and intangible assets acquired and liabilities assumed at fair value and the resulting goodwill recognized. Accordingly, the final acquisition accounting adjustments may differ materially from the pro forma adjustments reflected in this document. For more information, please see the section entitled "Certain Financial Information Regarding MidWestOne and ATBancorp Unaudited Pro Forma Condensed Combined Financial Information" beginning on page 28.

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The opinion of ATBancorp's financial advisor delivered to ATBancorp's board of directors, and the opinion of MidWestOne's financial advisor delivered to MidWestOne's board of directors, in each case prior to execution of the Merger Agreement, will not reflect any changes in circumstances that may have occurred since the respective dates of the opinions.

The fairness opinion of ATBancorp's financial advisor was delivered to ATBancorp's board of directors on August 20, 2018, and the fairness opinion of MidWestOne's financial advisor was delivered to MidWestOne's board of directors on August 21, 2018. Changes in the operations and prospects of ATBancorp or MidWestOne, general market and economic conditions and other factors which may be beyond the control of ATBancorp and MidWestOne may have altered the value of ATBancorp or MidWestOne or the prices of shares of ATBancorp common stock or MidWestOne common stock as of the date of this joint proxy statement/prospectus, or may alter such values and prices by the time the Merger is completed. The opinions from ATBancorp's and MidWestOne's respective financial advisors do and will not speak as of the date of this joint proxy statement/prospectus or the time the Merger is completed or any other date other than the respective dates of those opinions. For a description of the opinions of ATBancorp's and MidWestOne's respective financial advisors, please refer to the sections entitled "The Merger Opinion of ATBancorp's Financial Advisor" beginning on page 86 and "The Merger Opinion of MidWestOne's Financial Advisor" beginning on page 70.

ATBancorp shareholders will pay U.S. federal income tax on the Per Share Cash Consideration and cash received in connection with any fractional shares.

The Per Share Cash Consideration and cash received in connection with any fractional shares that ATBancorp shareholders receive in connection with the Merger will be taxable for U.S. federal income tax purposes. Each ATBancorp shareholder should consult its own tax advisor as to the tax consequences of the Merger in its particular circumstances, including the applicability and effect of the alternative minimum tax and any state, local, foreign or other tax laws and of changes in those laws. This joint proxy statement/prospectus does not address any tax consequences arising under the laws of any state, local or foreign jurisdiction, or under any U.S. federal laws other than those pertaining to the income tax nor does it address any tax consequences arising under the unearned income Medicare contribution tax pursuant to the Health Care and Education Reconciliation Act of 2010. See "Material U.S. Federal Income Tax Consequences of the Merger" beginning on page 129.

The amount of consideration to be received by shareholders exercising their appraisal rights is uncertain.

ATBancorp shareholders will have the right to demand appraisal of their shares of ATBancorp common stock and obtain payment in cash for the fair value of their shares, but only if they perfect their appraisal rights and comply with the applicable provisions of Iowa law. ATBancorp shareholders may or may not be entitled to receive more than the amount provided for in the Merger Agreement for their shares of ATBancorp common stock if they elect to exercise their appraisal rights with respect to the proposed Merger, depending on the appraisal of the fair value of the ATBancorp common stock. For this reason, the amount of cash that an ATBancorp shareholder might be entitled to receive should it elect to exercise its appraisal rights may be more or less than the value of the Merger consideration to be paid pursuant to the Merger Agreement. In addition, it is a condition in the Merger Agreement that the holders of not more than 7.5% of the outstanding shares of ATBancorp common stock shall have exercised their statutory dissenters' rights under Iowa law. The number of shares of ATBancorp shareholders that will exercise appraisal rights is not known and therefore there is no assurance of this closing condition being satisfied.

MidWestOne will be required to issue debt in order to finance the Per Share Cash Consideration.

As part of the Merger consideration, MidWestOne will pay each ATBancorp shareholder the Per Share Cash Consideration for each share of ATBancorp common stock owned by the shareholder. In

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order to pay the Per Share Cash Consideration, MidWestOne will be required to issue equity or debt, the proceeds from which would be used to pay the Per Share Cash Consideration. While MidWestOne currently expects to issue senior debt in order to finance the payment of the aggregate Per Share Cash Consideration, it is possible that MidWestOne will not be able to complete such an offering, or will not be able to complete such an offering on terms favorable to MidWestOne. Further, an issuance of senior debt could require MidWestOne to pledge its ownership interest in MidWestOne Bank, which could limit MidWestOne's ability to secure additional financing in the future.

Risks Related to the Ownership of MidWestOne Common Stock

An investment in MidWestOne common stock is not an insured deposit.

MidWestOne's common stock is not a bank deposit and, therefore, is not insured against loss by the FDIC, any other deposit insurance fund or by any other public or private entity. Investment in MidWestOne common stock is inherently risky for the reasons described in this "Risk Factors" section and elsewhere in this report and is subject to the same market forces that affect the price of common stock in any company. As a result, an ATBancorp shareholder who acquires MidWestOne common stock in the Merger could lose some or all of the shareholder's investment.

The trading volume in MidWestOne common stock is less than that of other larger financial services companies.

Although MidWestOne's common stock is listed for trading on the NASDAQ Global Select Market, its trading volume is generally less than that of other, larger financial services companies, and investors are not assured that a liquid market will exist at any given time for MidWestOne common stock. A public trading market having the desired characteristics of depth, liquidity and orderliness depends on the presence in the marketplace at any given time of willing buyers and sellers of MidWestOne common stock. This presence depends on the individual decisions of investors and general economic and market conditions over which MidWestOne has no control. Given the lower trading volume of MidWestOne's common stock, significant sales of MidWestOne common stock, or the expectation of these sales, could cause MidWestOne's stock price to fall.

The holders of MidWestOne's junior subordinated debentures have rights that are senior to those of MidWestOne's shareholders.

MidWestOne currently has outstanding an aggregate of \$23.8 million in junior subordinated debentures in connection with trust preferred securities issuances by MidWestOne's statutory trust subsidiaries and will assume pursuant to the Merger an additional \$19.5 million in junior subordinated debentures in connection with trust preferred securities issuances by ATBancorp's statutory trust subsidiaries and \$10.8 million of ATBancorp's subordinated debentures. MidWestOne conditionally guarantees payments of the principal and interest on the trust preferred securities. The junior subordinated debentures and the subordinated debentures are senior to MidWestOne's shares of common stock. As a result, MidWestOne must make payments on the junior subordinated debentures (and the related trust preferred securities) and the subordinated debentures before any dividends can be paid on MidWestOne common stock and, in the event of MidWestOne's bankruptcy, dissolution or liquidation, the holders of the debentures must be satisfied before any distributions can be made to the holders of MidWestOne common stock. Additionally, MidWestOne has the right to defer periodic distributions on the junior subordinated debentures (and the related trust preferred securities) for up to 20 consecutive quarters, during which time MidWestOne would be prohibited from paying dividends on its common stock. MidWestOne's ability to pay the future distributions depends upon the earnings of MidWestOne Bank and the dividends from MidWestOne Bank to MidWestOne, which may be inadequate to service the obligations.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Certain statements contained in this document that are not statements of historical fact constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, notwithstanding that such statements are not specifically identified as such. Examples of forward-looking statements include, but are not limited to: (i) projections of revenues, expenses, income or loss, earnings or loss per share, the payment or nonpayment of dividends, capital structure and other financial items; (ii) statements of plans, objectives and expectations of MidWestOne, ATBancorp or their respective management or boards of directors, including those relating to products or services; (iii) statements of future economic performance; and (iv) statements of assumptions underlying such statements. Words such as "believes," "anticipates," "expects," "intends," "targeted," "projected," "continue," "remain," "will," "should," "could," "may" and other similar expressions are intended to identify forward-looking statements but are not the exclusive means of identifying such statements and the lack of such an identifying word does not necessarily indicate the absence of a forward-looking statement.

Forward-looking statements are based on assumptions and involve risks and uncertainties, many of which are beyond MidWestOne's and ATBancorp's control, which may cause actual results to differ materially from those discussed in such statements. Factors that could cause actual results to differ from those discussed in the forward-looking statements include, but are not limited to:

the ability to obtain regulatory approvals and meet other closing conditions to the Merger, including approval by MidWestOne's shareholders and ATBancorp's shareholders, on the expected terms and schedule;

delays in closing the Merger;

difficulties and delays in integrating the MidWestOne and ATBancorp businesses, fully realizing cost savings and other benefits or that or such integration may be more difficult, time consuming or costly than expected;

expected revenue synergies and cost savings from the Merger may not be fully realized or realized within the expected time frame;

business disruptions following the Merger;

deposit attrition, operating costs, customer loss and business disruption following the Merger, including, without limitation, difficulties in maintaining relationships with employees and counterparties, may be greater than expected;

changes in asset quality and credit risk;

revenues following the Merger may be lower than expected;

inability to sustain revenue and earnings growth;

ability to access capital markets;

inflation, interest rate, securities market and monetary fluctuations;

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local, regional, national and international economic conditions and the impact they may have on *MidWestOne* and *ATBancorp* and their customers and *MidWestOne* and *ATBancorp's* assessment of that impact;

customer acceptance of *MidWestOne's* and *ATBancorp's* products and services;

customer borrowing, repayment, investment and deposit practices;

customer disintermediation;

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the introduction, withdrawal, success and timing of business initiatives;

changes in the competitive environment among financial holding companies and banks; and

other factors, which could cause actual results to differ materially from future results expressed or implied by such forward-looking statements.

The foregoing list of important factors may not be all inclusive, and we specifically decline to undertake any obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made, or to reflect the occurrence of unanticipated events. For a further discussion of these and other risks, uncertainties and other factors applicable to *MidWestOne* and *ATBancorp*, see the section entitled "Risk Factors" in this joint proxy statement/prospectus and *MidWestOne's* other filings with the SEC incorporated by reference into this joint proxy statement/prospectus, including the "Risk Factors" and the forward-looking statement disclosure contained in *MidWestOne's* Annual Report on Form 10-K, filed with the SEC on March 1, 2018.

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MIDWESTONE SPECIAL MEETING OF SHAREHOLDERS

Date, Time and Place

The special meeting of MidWestOne shareholders will be held at 102 South Clinton Street, Summerwill Conference Room, Iowa City, IA 52240 at 10:00 a.m., Central Time, on Friday, January 11, 2019. On or about December 5, 2018, MidWestOne commenced mailing this document and the enclosed form of proxy to its shareholders entitled to vote at the MidWestOne special meeting.

Purpose of MidWestOne Special Meeting

At the MidWestOne special meeting, MidWestOne shareholders will be asked to:

approve the MidWestOne merger proposal;

approve the MidWestOne stock issuance proposal;

approve the MidWestOne adjournment proposal (if necessary or appropriate); and

transact such other business as may properly come before the meeting or any adjournment thereof.

Recommendation of the MidWestOne Board of Directors

The MidWestOne board of directors recommends that you vote "FOR" the MidWestOne merger proposal, "FOR" the MidWestOne stock issuance proposal and "FOR" the MidWestOne adjournment proposal (if necessary or appropriate). Please see the section entitled "The Merger Recommendation of the MidWestOne Board of Directors and Reasons for the Merger" beginning on page 68.

MidWestOne Record Date and Quorum

The MidWestOne board of directors has fixed the close of business on November 26, 2018 as the record date for determining the holders of MidWestOne common stock entitled to receive notice of and to vote at the MidWestOne special meeting.

As of the MidWestOne record date, there were 12,222,145 shares of MidWestOne common stock outstanding and entitled to vote at the MidWestOne special meeting held by approximately 425 holders of record. Each share of MidWestOne common stock entitles the holder to one vote at the MidWestOne special meeting on each proposal to be considered at the MidWestOne special meeting.

A majority of the outstanding shares of MidWestOne entitled to vote, represented in person or by proxy, will constitute a quorum for the transaction of business at the MidWestOne special meeting. Abstentions and broker non-votes will be included in determining the number of shares present at the meeting for the purpose of determining the presence of a quorum.

As of the MidWestOne record date, directors and executive officers of MidWestOne owned and were entitled to vote 392,994 shares of MidWestOne common stock, representing approximately 3.2% of the shares of MidWestOne common stock outstanding on that date. MidWestOne currently expects that MidWestOne's directors and executive officers will vote their shares in favor of each of the MidWestOne proposals. As of the MidWestOne record date, ATBancorp beneficially held no shares of MidWestOne common stock.

Required Vote

The affirmative vote of a majority of the votes entitled to be cast on the proposal is required to approve the MidWestOne merger proposal. The affirmative vote of a majority of the shares of MidWestOne common stock represented in person or by proxy at the MidWestOne special meeting and

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entitled to vote on the proposal is required to approve the MidWestOne stock issuance proposal and the MidWestOne adjournment proposal.

Treatment of Abstentions; Failure to Vote

For purposes of the MidWestOne special meeting, an abstention occurs when a MidWestOne shareholder attends the MidWestOne special meeting, either in person or by proxy, but abstains from voting.

For the MidWestOne merger proposal, if a MidWestOne shareholder present in person at the MidWestOne special meeting abstains from voting, or responds by proxy with an "abstain" vote, it will have the same effect as a vote cast "AGAINST" this proposal. If a MidWestOne shareholder is not present in person at the MidWestOne special meeting at which there is a quorum and does not respond by proxy, it will have no effect on the vote count for such proposal.

For the MidWestOne stock issuance proposal and the MidWestOne adjournment proposal, if a MidWestOne shareholder present in person at the MidWestOne special meeting abstains from voting, or responds by proxy with an "abstain" vote, it will have the same effect as a vote cast "AGAINST" each such proposal. If a MidWestOne shareholder is not present in person at the MidWestOne special meeting at which there is a quorum and does not respond by proxy, it will have no effect on the vote count for each such proposal.

Voting on Proxies; Incomplete Proxies

Giving a proxy means that a MidWestOne shareholder authorizes the persons named in the enclosed proxy card to vote such holder's shares at the MidWestOne special meeting in the manner such holder directs. A MidWestOne shareholder may vote by proxy or in person at the MidWestOne special meeting. If you hold your shares of MidWestOne common stock in your name as a shareholder of record, to submit a proxy, you, as a MidWestOne shareholder, may use one of the following methods:

By telephone: Use any touch-tone telephone to vote your proxy 24 hours a day, seven days a week. Have your proxy card handy when you call. Follow the instructions given to you.

Through the Internet: Use the Internet to vote your proxy 24 hours a day, seven days a week. Have your proxy card handy when you access the website. Follow the instructions on the web site to obtain your records and to create an electronic voting instruction form.

By mail: Complete and return the proxy card in the enclosed envelope. The envelope requires no additional postage if mailed in the United States.

MidWestOne requests that MidWestOne shareholders vote by telephone, over the Internet or by completing and signing the accompanying proxy card and returning it to MidWestOne as soon as possible in the enclosed postage-paid envelope. When the accompanying proxy card is returned properly executed, the shares of MidWestOne stock represented by it will be voted at the MidWestOne special meeting in accordance with the instructions contained on the proxy card.

If any proxy card is returned without indication as to how to vote, the shares of MidWestOne common stock represented by the proxy will be voted as recommended by the MidWestOne board of directors. Unless a MidWestOne shareholder checks the box on its proxy card to withhold discretionary authority, the proxyholders may use their discretion to vote on any other matters voted upon at the MidWestOne special meeting.

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If a MidWestOne shareholder's shares are held in "street name" by a broker, bank or other nominee, the shareholder should check the voting form used by that firm to determine whether it may vote by telephone or the Internet.

Every MidWestOne shareholder's vote is important. Accordingly, each MidWestOne shareholder should sign, date and return the enclosed proxy card, or vote via the Internet or by telephone, whether or not the MidWestOne shareholder plans to attend the MidWestOne special meeting in person.

Shares Held in Street Name

If you are a MidWestOne shareholder and your shares are held in "street name" through a bank, broker or other holder of record, you must provide the record holder of your shares with instructions on how to vote the shares. Please follow the voting instructions provided by the bank or broker. You may not vote shares held in street name by returning a proxy card directly to MidWestOne or by voting in person at the MidWestOne special meeting unless you provide a "legal proxy," which you must obtain from your broker, bank or other nominee. Further, brokers, banks or other nominees who hold shares of MidWestOne common stock on behalf of their customers may not give a proxy to MidWestOne to vote those shares with respect to any of the proposals without specific instructions from their customers, as brokers, banks and other nominees do not have discretionary voting power on these matters. Therefore, if you are a MidWestOne shareholder and you do not instruct your broker, bank or other nominee on how to vote your shares:

your broker, bank or other nominee may not vote your shares on the MidWestOne merger proposal, which broker non-votes will have no effect on the vote count for such proposal;

your broker, bank or other nominee may not vote your shares on the MidWestOne stock issuance proposal, which broker non-votes will have no effect on the vote count for this proposal; and

your broker, bank or other nominee may not vote your shares on the MidWestOne adjournment proposal, which broker non-votes will have no effect on the vote count for this proposal.

ESOP Participant Voting

For participants in the ESOP, the proxy card will also serve as a voting instruction card for the trustee of the ESOP with respect to shares held in the participants' accounts. A participant cannot direct the voting of shares allocated to the participant's account in the ESOP unless the proxy card is signed and returned in the return envelope provided. If proxy cards representing shares in the ESOP are not returned, those shares will be voted by the ESOP trustee in proportion to the results of the votes cast on the issue by the participants and beneficiaries.

Revocability of Proxies and Changes to a MidWestOne Shareholder's Vote

A MidWestOne shareholder has the power to change such shareholder's vote at any time before its shares of MidWestOne common stock are voted at the MidWestOne special meeting by:

timely submitting another proxy via the telephone or Internet, if that is the method that you originally used to submit your proxy;

signing another proxy card with a later date and returning that proxy card by mail;

sending notice to us that you are revoking your proxy; or

voting in person at the meeting.

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All written notices of revocation and other written communications with respect to revocation of proxies should be sent to: *MidWestOne* Financial Group, Inc., 102 South Clinton St., Iowa City,

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Iowa 52240, Attention: Corporate Secretary. If you hold your shares in the name of your broker or other fiduciary and desire to revoke your proxy, you will need to contact that party to revoke your proxy.

Solicitation of Proxies

The cost of solicitation of proxies from MidWestOne shareholders will be borne by MidWestOne. MidWestOne will reimburse brokerage firms and other custodians, nominees and fiduciaries for reasonable expenses incurred by them in sending proxy materials to the beneficial owners of common stock. In addition to solicitations by mail, MidWestOne's directors, officers and regular employees may solicit proxies personally or by telephone without additional compensation.

Attending the MidWestOne Special Meeting

Subject to space availability, all MidWestOne shareholders as of the MidWestOne record date, or their duly appointed proxies, may attend the MidWestOne special meeting.

If you hold your shares of MidWestOne common stock in your name as a shareholder of record and you wish to attend the MidWestOne special meeting, please bring your proxy and evidence of your stock ownership, such as your most recent account statement, to the MidWestOne special meeting. You must also bring valid picture identification.

If your shares of MidWestOne common stock are held in "street name" in a stock brokerage account or by a bank or nominee and you wish to attend the MidWestOne special meeting, you need to bring a copy of a bank or brokerage statement to the MidWestOne special meeting reflecting your stock ownership as of the MidWestOne record date. You must also bring valid picture identification. Please note that you may not vote shares held in street name unless you provide a "legal proxy," which you must obtain from your broker, bank or other nominee.

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MIDWESTONE PROPOSALS

MidWestOne Merger Proposal

As discussed throughout this joint proxy statement/prospectus, MidWestOne is asking its shareholders to approve the MidWestOne merger proposal. Holders of MidWestOne common stock should read carefully this joint proxy statement/prospectus in its entirety, including the appendices, for more detailed information concerning the Merger Agreement and the Merger. In particular, holders of MidWestOne common stock are directed to the Merger Agreement, a copy of which is attached as *Appendix A*.

Under Iowa law, an issuance of shares requires approval of the shareholders, at a meeting at which a quorum exists consisting of at least a majority of the votes entitled to be cast on the matter, if (i) the shares are issued for consideration other than cash or cash equivalents and (ii) the voting power of shares that are issued will comprise more than 20% of the voting power of the shares of the company that were outstanding immediately before the transaction.

If the Merger is completed pursuant to the Merger Agreement, MidWestOne currently expects to issue to ATBancorp shareholders 4,117,541 shares of MidWestOne common stock in connection with the Merger. Accordingly, the aggregate number of shares of MidWestOne common stock that MidWestOne will issue in the Merger will exceed 20% of the voting power of the shares of the company that were outstanding immediately before the transaction, and for this reason, MidWestOne is seeking the approval of MidWestOne merger proposal.

The MidWestOne board of directors recommends that MidWestOne shareholders vote "FOR" the MidWestOne merger proposal.

MidWestOne Stock Issuance Proposal

It is a condition to completion of the Merger that MidWestOne shareholders approve the issuance of shares of MidWestOne common stock in the Merger.

Under NASDAQ rules and Iowa law, a company is required to obtain shareholder approval prior to the issuance of securities if the number of shares of common stock to be issued is, or will be upon issuance, equal to or in excess of 20% of the number of shares of common stock outstanding before the issuance of the common stock or of securities convertible into or exercisable for common stock. If the Merger is completed pursuant to the Merger Agreement, MidWestOne currently expects to issue to ATBancorp shareholders 4,117,541 shares of MidWestOne common stock in connection with the Merger. Accordingly, the aggregate number of shares of MidWestOne common stock that MidWestOne will issue in the Merger will exceed 20% of the shares of MidWestOne common stock outstanding before such issuance, and for this reason, MidWestOne is seeking the approval of MidWestOne shareholders for the issuance of shares of MidWestOne common stock pursuant to the Merger Agreement.

In the event this proposal is not approved by MidWestOne shareholders, the Merger cannot be consummated. In the event this proposal is approved by MidWestOne shareholders, but the Merger Agreement is terminated (without the Merger being completed) prior to the issuance of shares of MidWestOne common stock pursuant to the Merger Agreement, MidWestOne will not issue the shares of MidWestOne common stock.

The MidWestOne board of directors recommends that shareholders vote "FOR" the MidWestOne stock issuance proposal.

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MidWestOne Adjournment Proposal

The MidWestOne special meeting may be adjourned to another time or place, if necessary or appropriate, to permit, among other things, further solicitation of proxies if necessary to obtain additional votes in favor of the MidWestOne merger proposal and the MidWestOne stock issuance proposal.

If, at the MidWestOne special meeting, the number of shares of MidWestOne common stock present or represented and voting in favor of the MidWestOne merger proposal and the MidWestOne stock issuance proposal is insufficient to approve the proposals, MidWestOne intends to move to adjourn the MidWestOne special meeting in order to enable the MidWestOne board of directors to solicit additional proxies for approval of the proposal.

In the MidWestOne adjournment proposal, MidWestOne is asking its shareholders to authorize the holder of any proxy solicited by the MidWestOne board of directors to vote in favor of granting discretionary authority to the proxy holders, to adjourn the MidWestOne special meeting to another time and place. If the MidWestOne shareholders approve the MidWestOne adjournment proposal, MidWestOne could adjourn the MidWestOne special meeting and any adjourned session of the MidWestOne special meeting and use the additional time to, among other things, solicit additional proxies, including the solicitation of proxies from MidWestOne shareholders who have previously voted.

The MidWestOne board of directors recommends that shareholders vote "FOR" the MidWestOne adjournment proposal.

Other Matters to Come Before the MidWestOne Special Meeting

No other matters are intended to be brought before the MidWestOne special meeting by MidWestOne, and MidWestOne does not know of any matters to be brought before the MidWestOne special meeting by others. If any proxy is returned without indication as to how to vote, the shares of MidWestOne common stock represented by the proxy will be voted as recommended by the MidWestOne board of directors. Unless a MidWestOne shareholder checks the box on its proxy card to withhold discretionary authority, the proxyholders may use their discretion to vote on any other matters voted upon at the MidWestOne special meeting.

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ATBANCORP SPECIAL MEETING OF SHAREHOLDERS

Date, Time and Place

The special meeting of ATBancorp shareholders will be held at American Trust & Savings Bank, 895 Main Street, Dubuque, Iowa 52001 at 11:00 a.m., Central Time, on Thursday, January 10, 2019. On or about December 5, 2018, ATBancorp commenced mailing this document and the enclosed form of proxy to its shareholders entitled to vote at the ATBancorp special meeting.

Purpose of ATBancorp Special Meeting

At the ATBancorp special meeting, ATBancorp shareholders will be asked to:

approve the ATBancorp merger proposal;

approve the ATBancorp adjournment proposal (if necessary or appropriate); and

transact such other business as may properly come before the meeting or any adjournment thereof.

Recommendation of the ATBancorp Board of Directors

The ATBancorp board of directors recommends that you vote "FOR" the ATBancorp merger proposal and "FOR" the ATBancorp adjournment proposal (if necessary or appropriate). Please see the section entitled "The Merger Recommendation of the ATBancorp Board of Directors and Reasons for the Merger" beginning on page 83.

In connection with entering into the Merger Agreement, certain holders of ATBancorp common stock owning 62.41% of the outstanding ATBancorp common stock entered into the Voting Agreement with MidWestOne, pursuant to which they have agreed to vote in favor of the ATBancorp merger proposal and for the approval of any proposal to adjourn or postpone the ATBancorp special meeting to a later date if there are not sufficient votes to approve the ATBancorp merger proposal. For more information regarding the Voting Agreement, please see the section entitled "The Merger Agreement Voting Agreement" beginning on page 127.

ATBancorp Record Date and Quorum

The ATBancorp board of directors has fixed the close of business on November 15, 2018 as the record date for determining the holders of ATBancorp common stock entitled to receive notice of and to vote at the ATBancorp special meeting.

As of the ATBancorp record date, there were 35,028 shares of ATBancorp common stock outstanding and entitled to vote at the ATBancorp special meeting held by 18 holders of record. Each share of ATBancorp common stock entitles the holder to one vote at the ATBancorp special meeting on each proposal to be considered at the ATBancorp special meeting.

The representation of holders of at least a majority of the votes entitled to be cast on the matters to be voted on at the ATBancorp special meeting constitutes a quorum for transacting business at the ATBancorp special meeting. All shares of ATBancorp common stock, whether present in person or represented by proxy, including abstentions, will be treated as present for purposes of determining the presence or absence of a quorum for all matters voted on at the ATBancorp special meeting.

As of the ATBancorp record date, directors and executive officers of ATBancorp owned and were entitled to vote 23,323 shares of ATBancorp common stock, representing approximately 66.6% of the shares of ATBancorp common stock outstanding on that date.

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As described under "The Merger Agreement Voting Agreement," in connection with entering into the Merger Agreement, MidWestOne and certain shareholders of ATBancorp entered into the Voting Agreement. The shareholders that are party to the Voting Agreement include directors and executive officers of ATBancorp and, together, beneficially own in the aggregate 62.41% of the outstanding shares of ATBancorp common stock. The Voting Agreement requires that the shareholders party thereto vote all of their shares of ATBancorp common stock in favor of the Merger and against alternative acquisition proposals.

Required Vote

The affirmative vote of a majority of the shares of ATBancorp common stock represented in person or by proxy at the ATBancorp special meeting and entitled to vote on the proposal is required to approve the ATBancorp merger proposal. Pursuant to the Voting Agreement, approval of the ATBancorp merger proposal is virtually assured. The affirmative vote of a majority of the shares of ATBancorp common stock represented in person or by proxy at the ATBancorp special meeting and entitled to vote on the proposal is required to approve the ATBancorp adjournment proposal.

Treatment of Abstentions; Failure to Vote

For purposes of the ATBancorp special meeting, an abstention occurs when an ATBancorp shareholder attends the ATBancorp special meeting, either in person or represented by proxy, but abstains from voting.

For the ATBancorp merger proposal, if an ATBancorp shareholder present in person at the ATBancorp special meeting abstains from voting, or responds by proxy with an "abstain" vote, it will have the same effect as a vote cast "AGAINST" this proposal. If an ATBancorp shareholder is not present in person at the ATBancorp special meeting at which there is a quorum and does not respond by proxy, it will have no effect on the vote count for this proposal.

For the ATBancorp adjournment proposal, if an ATBancorp shareholder present in person at the ATBancorp special meeting abstains from voting, or responds by proxy with an "abstain" vote, it will have the same effect as a vote cast "AGAINST" this proposal. If an ATBancorp shareholder is not present in person at the ATBancorp special meeting at which there is a quorum and does not respond by proxy, it will have no effect on the vote count for this proposal.

Voting on Proxies; Incomplete Proxies

Giving a proxy means that an ATBancorp shareholder authorizes the persons named in the enclosed proxy card to vote such holder's shares at the ATBancorp special meeting in the manner such holder directs. An ATBancorp shareholder may vote by proxy or in person at the ATBancorp special meeting. If you hold your shares of ATBancorp common stock in your name as a shareholder of record, to submit a proxy, you, as an ATBancorp shareholder, may complete and return the proxy card in the enclosed postage-paid envelope.

ATBancorp requests that ATBancorp shareholders vote by completing and signing the accompanying proxy card and returning it to ATBancorp as soon as possible in the enclosed postage-paid envelope. When the accompanying proxy card is returned properly executed, the shares of ATBancorp stock represented by it will be voted at the ATBancorp special meeting in accordance with the instructions contained on the proxy card.

If any proxy card is returned without indication as to how to vote, the shares of ATBancorp common stock represented by the proxy card will be voted as recommended by the ATBancorp board of directors. Unless an ATBancorp shareholder checks the box on its proxy card to withhold

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discretionary authority, the proxyholders may use their discretion to vote on any other matters voted upon at the ATBancorp special meeting.

Every ATBancorp shareholder's vote is important. Accordingly, each ATBancorp shareholder should sign, date and return the enclosed proxy card, whether or not the ATBancorp shareholder plans to attend the ATBancorp special meeting in person.

Revocability of Proxies and Changes to an ATBancorp Shareholder's Vote

An ATBancorp shareholder has the power to change its vote at any time before its shares of ATBancorp common stock are voted at the ATBancorp special meeting by:

by sending a notice of revocation to the corporate secretary of ATBancorp;

by sending a completed proxy card bearing a later date than your original proxy card; or

by attending the ATBancorp special meeting and voting in person.

All written notices of revocation and other written communications with respect to revocation of proxies should be sent to: ATBancorp, 895 Main Street, Dubuque, Iowa 52001, Attention: Secretary. If you choose any of the first two methods, you must take the described action such that the notice or proxy card, as applicable, is received no later than the beginning of the ATBancorp special meeting.

Solicitation of Proxies

The cost of solicitation of proxies from ATBancorp shareholders will be borne by ATBancorp. In addition to solicitations by mail, ATBancorp's directors, officers and regular employees may solicit proxies personally or by telephone without additional compensation.

Attending the ATBancorp Special Meeting

All ATBancorp shareholders as of the ATBancorp record date, or their duly appointed proxies, may attend the ATBancorp special meeting. If you hold your shares of ATBancorp common stock in your name as a shareholder of record and you wish to attend the ATBancorp special meeting, please bring your proxy to the ATBancorp special meeting.

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ATBANCORP PROPOSALS

ATBancorp Merger Proposal

As discussed throughout this joint proxy statement/prospectus, ATBancorp is asking its shareholders to approve the ATBancorp merger proposal. Holders of ATBancorp common stock should read carefully this joint proxy statement/prospectus in its entirety, including the appendices, for more detailed information concerning the Merger Agreement and the Merger. In particular, holders of ATBancorp common stock are directed to the Merger Agreement, a copy of which is attached as *Appendix A*.

The ATBancorp board of directors recommends a vote "FOR" the ATBancorp merger proposal.

ATBancorp Adjournment Proposal

The ATBancorp special meeting may be adjourned to another time or place, if necessary or appropriate, to permit, among other things, the solicitation of additional proxies if there are insufficient votes at the time of the ATBancorp special meeting to approve the ATBancorp merger proposal.

If, at the ATBancorp special meeting, the number of shares of ATBancorp common stock present or represented and voting in favor of the ATBancorp merger proposal is insufficient to approve the ATBancorp merger proposal, ATBancorp intends to move to adjourn the ATBancorp special meeting in order to enable the ATBancorp board of directors to solicit additional proxies for approval of the Merger. In that event, ATBancorp will ask its shareholders to vote only upon the ATBancorp adjournment proposal, and not the ATBancorp merger proposal.

In the ATBancorp adjournment proposal, ATBancorp is asking its shareholders to authorize the holder of any proxy solicited by the ATBancorp board of directors to vote in favor of granting discretionary authority to the proxy holders to adjourn the ATBancorp special meeting to another time and place. If the ATBancorp shareholders approve the ATBancorp adjournment proposal, ATBancorp could adjourn the ATBancorp special meeting and use the additional time to, among other things, solicit additional proxies, including the solicitation of proxies from ATBancorp shareholders who have previously voted.

The ATBancorp board of directors recommends that shareholders vote "FOR" the ATBancorp adjournment proposal.

Other Matters to Come Before the ATBancorp Special Meeting

No other matters are intended to be brought before the ATBancorp special meeting by ATBancorp, and ATBancorp does not know of any matters to be brought before the ATBancorp special meeting by others. If, however, any other matters properly come before the ATBancorp special meeting, the persons named in the proxy will vote the shares represented thereby in accordance with their best judgment on any such matter.

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THE MERGER

The following is a discussion of the Merger and the material terms of the Merger Agreement between MidWestOne and ATBancorp. You are urged to read carefully the Merger Agreement in its entirety, a copy of which is attached as Appendix A to this document and incorporated by reference herein. This summary does not purport to be complete and may not contain all of the information about the Merger Agreement that is important to you. This section is not intended to provide you with any factual information about MidWestOne or ATBancorp. Such information can be found elsewhere in this document and in the public filings MidWestOne makes with the SEC, including the Merger Agreement, as described in the section entitled "Where You Can Find More Information" in the forepart of this document.

Terms of the Merger

Transaction Structure

MidWestOne's and ATBancorp's boards of directors have approved the Merger Agreement. The Merger Agreement provides for the merger of ATBancorp with and into MidWestOne, with MidWestOne continuing as the surviving corporation. Immediately following the Merger, each of ATSB and ABTW, each of which is a wholly-owned subsidiary of ATBancorp, will merge with and into MidWestOne Bank, with MidWestOne Bank continuing as the surviving bank. Pursuant to the Merger Agreement, MidWestOne's board of directors will be the board of directors of the combined company until the combined company's next annual meeting of shareholders. Pursuant to the Merger Agreement, MidWestOne will appoint two individuals mutually agreeable to MidWestOne and to ATBancorp to serve as members of MidWestOne's board of directors, with one individual to serve as a Class I director and another individual to serve as a Class II director. Each individual's service on MidWestOne's board of directors will begin immediately upon the effectiveness of the Merger.

Merger Consideration

In the Merger, each share of ATBancorp common stock issued and outstanding immediately prior to the Effective Time, excluding any Cancelled Shares and any Dissenters' Shares, shall represent the right to receive the Per Share Stock Consideration and the Per Share Cash Consideration.

For each fractional share that would otherwise be issued, MidWestOne will pay cash in an amount equal to such fraction multiplied by the Closing Acquiror Common Stock Price. No interest will be paid or accrued on cash payable to holders in lieu of fractional shares.

Based on MidWestOne's common stock's closing price of \$33.25 on August 21, 2018, the day before the announcement of the Merger, the transaction value is estimated at \$171.67 million, or \$4,901.05 per share of ATBancorp common stock. Based on MidWestOne's common stock's closing price of \$28.98 on November 26, 2018, the transaction value is estimated at \$154.09 million, or \$4,399.11 per share of ATBancorp common stock. Based on a Final Acquiror Market Value of MidWestOne's closing stock of \$26.60 (the price beneath which ATBancorp would have the right to terminate the Merger Agreement, subject to the other conditions therein, including MidWestOne's right to increase the amount of consideration payable to ATBancorp shareholders), the transaction value is estimated at \$144.29 million, or \$4,119.34 per share of ATBancorp common stock. The ultimate value of the consideration received by ATBancorp shareholders will depend on the trading value of MidWestOne common stock prior to the closing of the Merger.

Background of the Merger

Each of the MidWestOne and the ATBancorp board of directors and management regularly review their respective business strategies, opportunities and challenges as part of their consideration and evaluation of their respective long-term prospects, with the goal of enhancing value for their respective

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shareholders. These strategic considerations have focused on, among other things, the business, economic and regulatory environment facing financial institutions, generally, and each of MidWestOne and ATBancorp, particularly, as well as overall conditions and ongoing consolidation in the financial services industry. In addition, MidWestOne regularly evaluates business combination opportunities in furtherance of its strategic objectives.

In the spring and summer of 2017, the executives, board members, certain shareholders who were not executives or board members and other representatives of ATBancorp held many conversations, both by telephone and in person, about ATBancorp's strategic plan, including possible strategic alternatives or remaining an independent company and pursuing other growth opportunities. ATBancorp's board of directors recognized the stated near-term goal of many of ATBancorp's shareholders to enhance ATBancorp's profitability, maximize shareholder value and provide increased liquidity for shareholders in ATBancorp common stock. As a result of these conversations, ATBancorp's board of directors determined that it was in the best interest of the shareholders to more actively explore its strategic options. During this time, the management team and board of directors met with several investment banking firms to review ATBancorp's possible strategic alternatives and provide advice regarding a possible business combination with another entity.

The investment banking firms with which ATBancorp met generally recommended divesting United American Bank, headquartered in San Mateo, California, and owned 83% by ATBancorp, to separate it from ATBancorp's Midwestern operations, on the basis that doing so would likely make the most strategic sense to maximize ATBancorp's value in its investment in United American Bank and, therefore, to maximize the overall value of ATBancorp. A primary reason to address United American Bank separately was the general lack of potential counterparties interested in combining with an organization as geographically diverse as ATBancorp with banking subsidiaries in Iowa, Wisconsin and California. In July 2017, without deciding whether it would support any particular strategic transaction involving United American Bank, ATBancorp advised an independent M&A committee of United American Bank that it would not object to United American Bank's engagement of Sandler O'Neill as its financial advisor to contact parties that might be interested in pursuing a strategic transaction. Following a marketing process led by Sandler O'Neill, United American Bank determined to move forward with a sale, through a merger transaction, to Heritage Commerce Corp. Following several months of due diligence and negotiation, on January 10, 2018, ATBancorp, United American Bank and Heritage Commerce Corp. entered into a definitive agreement for the merger of United American Bank with Heritage Bank of Commerce, headquartered in San Jose, California, and the wholly owned subsidiary of Heritage Commerce Corp. In connection with the closing of the transaction, which occurred on May 4, 2018, ATBancorp received \$9.1 million in cash and approximately 2.3 million shares of Heritage Commerce Corp common stock, valued at approximately \$39.0 million at the time of closing. Shortly after the disposition of United American Bank, on May 10, 2018, ATBancorp sold all of the shares of Heritage Commerce Corp common stock it received to an unrelated third party and received net proceeds, after the payment of brokerage commissions, of approximately \$37.9 million.

Throughout the winter of 2017 into 2018, the ATBancorp board of directors and management team continued their general discussions of ATBancorp's strategic alternatives, and discussions of various legal matters related to an exploration of its strategic options, including the board's fiduciary duties, obligations under federal and state securities laws, the due diligence process and maintaining confidentiality throughout the process. On February 20, 2018, ATBancorp engaged Sandler O'Neill to act as its financial advisor in connection with its exploration of its strategic options and executed an engagement letter with Sandler O'Neill to that effect. After reviewing discussions with various financial advisors that the board of directors had met with the prior summer, the board selected Sandler O'Neill as its financial advisor based on, among other factors, Sandler O'Neill's reputation, experience in mergers and acquisitions, prior relationship with ATBancorp in the sale of United American Bank and familiarity with ATBancorp's strategic goals and the industry in which it operates. Representatives of

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Sandler O'Neill discussed with the ATBancorp board of directors on February 20, 2018 the then-current state of the banking industry; ATBancorp's general financial performance; strategic options available to ATBancorp, such as listing its shares on a securities exchange, divestiture opportunities of certain pieces of the company, and remaining independent; and preliminary views on possible valuation ranges and financial institutions that may be interested in evaluating a strategic transaction with ATBancorp. Following this discussion, the board of directors concluded that it was in the best interests of the shareholders to have Sandler O'Neill fully explore the strategic opportunities for ATBancorp that would result in a change of control of the organization.

Over the next several weeks, representatives of Sandler O'Neill worked with the ATBancorp board of directors and management team to develop a list of potential merger partners. The list was based on likelihood of interest, financial capacity and perceived potential to obtain required regulatory approvals. During this time, representatives of Sandler O'Neill also worked with management of ATBancorp, as well as representatives of Barack Ferrazzano Kirschbaum & Nagelberg LLP ("Barack Ferrazzano"), counsel to ATBancorp, to develop materials necessary for the process, including establishing a due diligence on-line data room, preparing confidentiality agreements and initial informational materials.

In the first week of April 2018, at ATBancorp's request, Sandler O'Neill began contacting representatives of the financial institutions previously identified as potential merger partners. Sandler O'Neill contacted MidWestOne on April 11, 2018. Of the 15 financial institutions contacted, six declined to engage in consideration of a transaction and nine, including MidWestOne, signed confidentiality agreements that included customary standstill provisions and were given access to an electronic data room that contained non-public information regarding ATBancorp's loans and deposits, credit quality, vendor contracts, and operating expenses.

On April 20, 2018, MidWestOne and ATBancorp entered into a confidentiality agreement and Sandler O'Neill provided MidWestOne with access to the ATBancorp electronic data room and MidWestOne began to conduct a due diligence review of ATBancorp. As part of this process, management of MidWestOne met with and had further discussions with representatives of ATBancorp, including an in-person meeting in Iowa City on May 14, 2018. At this introductory meeting, executives discussed the histories, cultures, operations and business models of their respective companies and the Iowa banking environment. MidWestOne's management also discussed the potential strategic benefits of a combination between MidWestOne and ATBancorp.

During this time period, eight other parties that entered into confidentiality agreements also conducted their due diligence reviews of ATBancorp. Through April 2018, several institutions informed Sandler O'Neill that they were not interested in pursuing a transaction with ATBancorp at that time, citing, among other things, ongoing internal projects making the proposed transaction too difficult to execute, as well as not being interested in expanding into the Dubuque market. Three institutions other than MidWestOne indicated their desire to continue their due diligence, have discussions with ATBancorp management and work toward developing a non-binding letter of intent to submit to ATBancorp.

During the second week of May 2018, two of these institutions held in-person meetings with ATBancorp's management. During the third week of May, 2018, another institution met with ATBancorp's management through a teleconference. Ultimately, none of these three other institutions submitted a proposal to Sandler O'Neill. Throughout April and the first half of May 2018, management and representatives of Sandler O'Neill and Barack Ferrazzano regularly updated the full board as to the process.

On May 17, 2018, MidWestOne delivered to Sandler O'Neill its preliminary, non-binding letter of intent that proposed an acquisition of ATBancorp by MidWestOne structured as a merger of ATBancorp with and into MidWestOne, and a merger of ATBancorp's subsidiary banks with and into MidWestOne Bank, at an aggregate implied purchase price of \$185.0 million, based on MidWestOne's

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closing stock price on May 15, 2018, or \$5,279.98 per share of ATBancorp common stock, payable 50% in stock and 50% cash. The letter of intent also had provisions relating to MidWestOne's expectation that certain ATBancorp shareholders agree to not sell their shares for a period of time following the closing of the transaction; and the possibility of ATBancorp shareholders having representatives on MidWestOne's board following any transaction. The proposal provided for a 60-day exclusivity period during which ATBancorp would not engage in any discussions regarding a possible transaction with any other parties. The proposal also allowed for the payment of a special pre-closing dividend to ATBancorp shareholders in the aggregate amount of \$20.0 million, with such dividend representing a portion of the proceeds to ATBancorp from the sale of Heritage Commerce Corp common stock, which had not yet been distributed to ATBancorp shareholders.

On May 23, 2018, the ATBancorp board met with representatives of Sandler O'Neill and Barack Ferrazzano to discuss the letter of intent received from MidWestOne. After a lengthy discussion regarding the levels of interest for a possible transaction, the current market environment and ATBancorp's ongoing evaluation of its value as an independent entity, the board determined that it would be in the best interest of its shareholders to not execute the letter of intent at that time, but to continue to negotiate with MidWestOne and attempt to receive a higher level of merger consideration. Over the next few weeks, the parties negotiated the terms of the letter intent, including the level of consideration and mix of cash and stock, board representation, lock-up arrangements for certain ATBancorp shareholders and the amount of the special dividend that MidWestOne would allow.

On June 6, 2018, MidWestOne submitted a revised non-binding letter of intent with ATBancorp, which provided for an aggregate implied purchase price of \$201.7 million, as of June 6, 2018, or \$5,756.59 per share of ATBancorp common stock, payable 75% in stock and 25% cash, and maintained the allowable special dividend to ATBancorp shareholders at the previously proposed amount of \$20.0 million. The ATBancorp board of directors met with its advisors on June 7, 2018 to discuss the latest proposed non-binding letter of intent. Following this discussion, the board of directors instructed its representatives to further negotiate with MidWestOne to increase the amount of the special dividend and to add further clarification regarding the proposed lock-up arrangement, board representation and other matters.

Following that meeting, MidWestOne submitted a revised non-binding letter of intent to ATBancorp, which, consistent with its prior indication, provided for an aggregate implied purchase price of \$201.7 million, based on MidWestOne's closing stock price on June 6, 2018, or \$5,756.59 per share of ATBancorp common stock, payable 75% in stock and 25% cash. The revised letter of intent increased the allowable special dividend to ATBancorp shareholders to \$21.8 million and provided other clarifications requested by ATBancorp's representatives. ATBancorp signed the non-binding letter of intent on June 11, 2018, and also agreed that it would not negotiate with any other parties or pursue other transactions.

On June 19, 2018, Barack Ferrazzano provided Shapiro Biegging Barber Otteson LLP, counsel to MidWestOne, with a first draft of the Merger Agreement. Over the course of the following weeks, the parties and their respective legal advisors exchanged drafts of the Merger Agreement, shareholder agreements and disclosure schedules thereto, several drafts of which were shared with the boards of directors of both companies. The parties worked toward finalizing the terms of the transaction, including the representations and warranties to be given by the parties; the operational covenants regarding ATBancorp's actions between signing of the Merger Agreement and the closing of the transaction; the level of severance and other rights of ATBancorp employees in connection with the proposed transaction; the terms of various employment arrangements for ATBancorp employees; the pre-closing disposition of certain of ATBancorp's assets and liabilities; and the provisions regarding a termination fee and ATBancorp's ability to pursue other transactions if necessary to satisfy its board of directors' fiduciary duties. During this period of negotiation, the parties and their representatives continued to conduct ongoing, reciprocal comprehensive due diligence regarding the business,

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operations and markets of the other party. MidWestOne also retained a consultant to review ATBancorp's trust business, including its retirement planning business.

On July 2, 2018, MidWestOne and ATBancorp entered into a confidentiality agreement to allow ATBancorp to conduct a more comprehensive diligence review of MidWestOne's non-public information. Also on July 2, 2018, management of MidWestOne and ATBancorp conducted an in-person meeting to further discuss the status of the process and the operations and business models of their respective companies. At this time, ATBancorp engaged a consulting firm to conduct a comprehensive review of MidWestOne's loan portfolio. ATBancorp also retained Kirkland & Ellis LLP, a law firm, to conduct legal due diligence on MidWestOne. Those due diligence reviews continued for several weeks. On August 10, 2018, MidWestOne and ATBancorp executed an extension to the final letter of intent, which extended the exclusivity period of the letter of intent to August 24, 2018. On July 20, 2018, management and representatives at MidWestOne and ATBancorp conducted an in-person meeting to perform reverse due diligence on MidWestOne and further discuss the status of the negotiations.

On July 23, 2018, MidWestOne informed ATBancorp of its intention to revise the financial terms of the transaction in light of, among other things, its decision to not acquire ATBancorp's retirement planning business, and certain related assets. Over the next two weeks, the parties negotiated revised pricing terms and the mechanics of disposing of ATBancorp's retirement business prior to closing. On August 3, 2018, MidWestOne delivered to ATBancorp in writing its revised financial terms, which provided for an aggregate implied purchase price of \$168.1 million, as of August 2, 2018, or \$4,798.78 per share of ATBancorp common stock, payable 75% in stock and 25% cash, with an increase in the allowable special dividend to ATBancorp shareholders to \$31.8 million. After several extensive discussions with its management team and its financial and legal advisors with respect to the revised financial terms and the process for disposing of the retirement business and the risks associated generally with a sale and the inclusion of the sale as a closing condition, the ATBancorp board of directors determined that it was in the best interests of the shareholders to continue negotiations with MidWestOne and to work toward a final definitive agreement.

Over the next several weeks, representatives of MidWestOne and ATBancorp negotiated various matters, including employee matters; change-in-control and other severance and retention arrangements; terms and requirements of the sale of the assets related to the retirement planning business; terms and timing of the dividends; and language regarding various representations and warranties in the Merger Agreement. Additionally, ATBancorp and MidWestOne prepared disclosure schedules during this time period. ATBancorp's management and its advisors met regularly with the ATBancorp board of directors and provided updates on the ongoing negotiations.

On August 20, 2018, the ATBancorp board of directors, together with its legal counsel and financial advisors, met at length to discuss the proposed Merger Agreement and the ancillary agreements. ATBancorp management also reported to the board of directors the results of its due diligence investigation of MidWestOne. The ATBancorp board of directors reviewed in detail the terms and conditions of the Merger Agreement and ancillary agreements with its legal counsel, copies of which had been delivered to the board members prior to the meeting. Sandler O'Neill presented its financial analysis and opinion to the ATBancorp board of directors on August 20, 2018 to the effect that, as of such date and subject to the assumptions made, matters considered and qualifications and limitations on the review undertaken by Sandler O'Neill in rendering its opinion as set forth therein, the per share Merger consideration was fair, from a financial point of view, to the common shareholders of ATBancorp. See "Opinion of ATBancorp's Financial Advisor." Among other matters, the ATBancorp board of directors reviewed the form and value of the consideration to be received by the shareholders, the price and historical performance of MidWestOne common stock and the implications of the Merger to ATBancorp's and its subsidiary banks' employees, customers and communities. Barack Ferrazzano also discussed various legal issues with the board members, including

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the board of directors' fiduciary duties. After consideration of these matters and the factors listed below at "Recommendation of the ATBancorp Board of Directors and Reasons for the Merger," the ATBancorp board of directors unanimously approved entering into the Merger Agreement. Representatives of ATBancorp reported the board's actions to MidWestOne's representatives following the meeting.

On August 21, 2018, the MidWestOne board of directors met to review the proposed definitive Merger Agreement. Representatives of Shapiro Bieging Barber Otteson LLP and Piper Jaffray attended the meeting. The MidWestOne board received a report from members of management with regard to their due diligence on ATBancorp. Also at this meeting, Piper Jaffray reviewed the financial aspects of the proposed Merger and rendered to MidWestOne's board of directors an opinion to the effect that, as of that date and subject to the procedures followed, assumptions made, matters considered, and qualifications and limitations on the review undertaken by Piper Jaffray as set forth in such opinion, the aggregate Merger consideration in the proposed Merger was fair, from a financial point of view, to MidWestOne. See "Opinion of MidWestOne's Financial Advisor." Representatives of Shapiro Bieging Barber Otteson LLP summarized with the board its fiduciary duties and reviewed in detail the terms of the Merger Agreement and ancillary documents, copies of which had been delivered to the board members in advance of the meeting.

On August 21, 2018, the parties executed the Merger Agreement and the ancillary documents. The shareholders of ATBancorp that are parties to the Voting Agreement and Lock-Up Agreements executed those agreements. Prior to the opening of the market on August 22, 2018, the parties issued a joint press release and MidWestOne filed a Form 8-K announcing the proposed transaction.

Recommendation of the MidWestOne Board of Directors and Reasons for the Merger

In reaching its decision to unanimously approve the Merger Agreement, the Merger and the other transactions contemplated by the Merger Agreement, the MidWestOne board of directors evaluated the Merger and the Merger Agreement in consultation with MidWestOne management, as well as MidWestOne's financial and legal advisors, and considered a number of factors, including the following material factors:

each of MidWestOne's, ATBancorp's and the combined company's business, operations, financial condition, asset quality, earnings and prospects;

the complementary nature of the businesses of the two companies. Also significant was the belief of the MidWestOne board of directors that the combination would result in a larger and more diversified financial institution that is both better equipped to respond to economic and industry developments and better positioned to develop and build on its strong market share;

the anticipated pro forma impact of the transaction on the combined company, including the expected impact on financial metrics including earnings and tangible equity per share and on regulatory capital levels, and MidWestOne's management's expectation that the combined company will retain a strong capital position upon completion of the transaction;

the potential to increase core deposits through expanded product offerings to ATBancorp's customer base, both current loan customers and prospects;

its understanding of the current and prospective environment in which MidWestOne and ATBancorp operate and will operate, including national, regional and local economic conditions, the interest rate environment, the continuing consolidation of the industry, increased operating costs resulting from regulatory initiatives and compliance mandates, increasing nationwide competition and current financial market conditions and the likely effects of these factors on the companies' potential growth, development, productivity and strategic options;

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its review and discussions with MidWestOne's management and legal advisor, Shapiro Bieging Barber Otteson LLP, concerning the due diligence examination of ATBancorp;

its review with its legal advisor of the Merger Agreement and other transaction agreements, including the provisions of the Merger Agreement designed to enhance the probability that the transaction will be completed;

the synergies potentially available in the proposed transaction which create the opportunity for the combined company to have superior future earnings and prospects compared to MidWestOne's earnings and prospects on a stand-alone basis;

the structure of the transaction as a true combination in which MidWestOne's board of directors and management would have substantial participation in the combined company;

the opinion, dated August 21, 2018, of Piper Jaffray to the MidWestOne board of directors as to the fairness, from a financial point of view and as of the date of the opinion, to MidWestOne of the aggregate Merger consideration in the proposed Merger, as more fully described under "Opinion of MidWestOne's Financial Advisor";

that the Merger Agreement restricts the conduct of ATBancorp's business between the date of the Merger Agreement and the date of the consummation of the Merger; and

the perceived similarity in corporate cultures, which would facilitate integration and implementation of the transaction;

the nature and amount of payments and other benefits to be received by ATBancorp employees in connection with the Merger.

The MidWestOne board of directors also considered a number of potential risks and uncertainties associated with the Merger in connection with its deliberation of the proposed transaction, including, without limitation, the following:

the potential risks associated with achieving anticipated cost synergies and savings and successfully integrating ATBancorp's business, operations and workforce with those of MidWestOne, including the costs and risks of successfully integrating the differing business models of the two companies;

the potential risk of diverting management attention and resources from the operation of MidWestOne's business and towards the completion of the Merger and the integration of the two companies;

the regulatory and other approvals required in connection with the Merger and the expected likelihood that such regulatory approvals will be received in a reasonably timely manner and without the imposition of unacceptable conditions;

the potential risks associated with achieving anticipated cost synergies and savings and successfully integrating MidWestOne's business, operations and workforce with those of ATBancorp; and

the possibility that the Merger might not be consummated and the effect of the resulting public announcement of the termination of the Merger on, among other things, the operations of MidWestOne.

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The foregoing discussion of the information and factors considered by the MidWestOne board of directors is not intended to be exhaustive, but includes the material factors considered by the MidWestOne board of directors. In reaching its decision to approve the Merger Agreement, the Merger and the other transactions contemplated by the Merger Agreement, the MidWestOne board of directors did not quantify or assign any relative weights to the factors considered, and individual directors may have given different weights to different factors. The MidWestOne board of directors considered all of these factors as a whole, and overall considered the factors to be favorable to, and to support its determination to approve entry into the Merger Agreement.

This explanation of MidWestOne's reasons for the Merger and other information presented in this section is forward-looking in nature and should be read in light of the section entitled "Cautionary Statement Regarding Forward-Looking Statements" beginning on page 51.

MidWestOne's board of directors realized that there can be no assurance about future results, including results expected or considered in the factors listed above, such as assumptions regarding enhanced business prospects, anticipated cost savings and earnings accretion/dilution. The board of directors concluded, however, that the potential positive factors outweighed the potential risks of completing the transaction.

For the reasons set forth above, the MidWestOne board of directors determined that the Merger Agreement, the Merger and the other transactions contemplated by the Merger Agreement, including the issuance of MidWestOne common stock in connection with the Merger, are advisable and in the best interests of MidWestOne and its shareholders, and approved the Merger Agreement and the transactions contemplated by it. The MidWestOne board of directors recommends that the MidWestOne shareholders vote "FOR" the MidWestOne merger proposal, "FOR" the MidWestOne stock issuance proposal and "FOR" the MidWestOne adjournment proposal (if necessary or appropriate).

Opinion of MidWestOne's Financial Advisor

By letter dated June 18, 2018, MidWestOne retained Piper Jaffray to act as its financial advisor in connection with a potential transaction. In its capacity as financial advisor, Piper Jaffray provided a fairness opinion to the board of directors of MidWestOne in connection with the Merger. At the meeting of the board of directors of MidWestOne on August 21, 2018, Piper Jaffray rendered its oral opinion to the MidWestOne board of directors (which was subsequently confirmed in writing by delivery of Piper Jaffray's written opinion dated the same date) that, based upon and subject to the various factors, assumptions and limitations set forth in such opinion, Piper Jaffray representatives' experience as investment bankers, Piper Jaffray's work as described in such opinion and other factors Piper Jaffray deemed relevant, as of such date, the aggregate consideration to be paid by MidWestOne pursuant to the Merger Agreement was fair from a financial point of view. The Piper Jaffray written opinion dated August 21, 2018 is sometimes referred to herein as the "Piper Jaffray Opinion."

The Piper Jaffray Opinion was provided for the information and assistance of the MidWestOne board of directors in connection with its consideration of the Merger. The Piper Jaffray Opinion did not address the merits of MidWestOne's underlying decision to engage in the Merger or the relative merits of the Merger compared to any alternative business strategy or transaction in which MidWestOne might engage. The Piper Jaffray Opinion does not constitute a recommendation to the MidWestOne board or any holder of MidWestOne common stock as to how any MidWestOne board member or such holder should vote with respect to the Merger.

The full text of the Piper Jaffray Opinion, which sets forth, among other things, the assumptions made, procedures followed, matters considered and limitations on the review undertaken in rendering its opinion, is attached as *Appendix C* to this joint proxy statement/prospectus and is incorporated herein by reference. The summary of the Piper Jaffray Opinion set forth herein is qualified in its

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entirety by reference to the full text of the opinion. MidWestOne common shareholders should read the full text of the opinion carefully and in its entirety. The Piper Jaffray Opinion was reviewed and approved by the fairness opinion committee of Piper Jaffray. Piper Jaffray provided its opinion to the board of directors of MidWestOne on August 21, 2018 in connection with and for the purposes of the MidWestOne board of directors' evaluation of the Merger. The Piper Jaffray Opinion addressed only the fairness, from a financial point of view, as of August 21, 2018, of the aggregate consideration to be paid by MidWestOne pursuant to the Merger. Piper Jaffray expressed no view or opinion as to any other terms or aspects of the Merger Agreement, the Merger or any other transactions contemplated by the Merger Agreement, including any legal, accounting and tax matters relating to the Merger and any such other transactions contemplated by the Merger Agreement.

In arriving at its opinion, Piper Jaffray has:

- (i) reviewed and analyzed the financial terms of a draft of the Merger Agreement dated August 19, 2018;
- (ii) reviewed and analyzed certain financial information, including historical operating data and financial forecasts, relating to the business, earnings, cash flow, assets, liabilities and prospects of MidWestOne and ATBancorp on a stand-alone basis that in each case were publicly available, as well as those that were furnished to Piper Jaffray by senior management of MidWestOne and ATBancorp, respectively, including the analyses and forecasts of certain cost savings expected by management of MidWestOne to result from the Merger (the "Synergies");
- (iii) conducted discussions with members of senior management and representatives of MidWestOne and ATBancorp concerning the matters described in clause (ii) above, as well as their respective businesses and prospects before and after giving effect to the Merger and the Synergies;
- (iv) reviewed the current and historical reported prices and trading activity of MidWestOne common stock;
- (v) compared the financial performance of MidWestOne and ATBancorp with that of certain publicly traded companies that Piper Jaffray deemed relevant;
- (vi) reviewed the financial terms, to the extent publicly available, of certain business combination transactions that Piper Jaffray deemed relevant; and
- (vii) performed a discounted cash flow analysis for each of MidWestOne and ATBancorp. In addition, Piper Jaffray conducted such other analyses, examinations and inquiries and considered such other financial, economic and market criteria as Piper Jaffray deemed necessary in arriving at its opinion.

Piper Jaffray, with MidWestOne management's consent, relied upon and assumed, without assuming liability or responsibility for independent verification, the accuracy and completeness of all information that was publicly available or was furnished, or otherwise made available, to Piper Jaffray or discussed with or reviewed by Piper Jaffray. Piper Jaffray further relied upon the assurances of the management of MidWestOne and ATBancorp that the financial information provided has been prepared on a reasonable basis in accordance with industry practice, and that they are not aware of any information or facts that would make any information provided to Piper Jaffray incomplete, inaccurate, or misleading. Without limiting the generality of the foregoing, for the purpose of the Piper Jaffray Opinion, Piper Jaffray was advised by the management of MidWestOne, and assumed with MidWestOne management's consent, that with respect to financial forecasts, estimates and other forward-looking information (including the Synergies) reviewed by Piper Jaffray, that such information has been reasonably prepared based on assumptions reflecting the best currently available estimates and judgments of the management of MidWestOne as to the expected future results of operations and financial condition of MidWestOne and ATBancorp, respectively. Piper Jaffray expressed no opinion as

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to any such financial forecasts, estimates or forward-looking information (including the Synergies) or the assumptions on which they were based. Piper Jaffray further assumed that the Merger would qualify as a tax-free reorganization for United States federal income tax purposes. Piper Jaffray relied, with MidWestOne management's consent, on advice of the outside counsel and the independent accountants to MidWestOne, and on the assumptions of the management of MidWestOne as to all accounting, legal, tax and financial reporting matters with respect to MidWestOne, ATBancorp and the Merger Agreement.

In arriving at its opinion, Piper Jaffray assumed that the executed Merger Agreement would be in all material respects identical to the last draft reviewed by Piper Jaffray. Piper Jaffray relied upon and assumed, without independent verification, that (i) the representations and warranties of all parties to the Merger Agreement and all other related documents and instruments that are referred to therein are true and correct in all respects material to the analysis, (ii) each party to such agreements will fully and timely perform all of the covenants and agreements required to be performed by such party, (iii) the Merger will be consummated pursuant to the terms of the Merger Agreement without amendments thereto and (iv) all conditions to the consummation of the Merger will be satisfied without waiver by any party of any conditions or obligations thereunder. Additionally, Piper Jaffray assumed that all the necessary regulatory approvals and consents required for the Merger will be obtained in a manner that will not adversely affect MidWestOne, ATBancorp or the contemplated benefits of the Merger.

In arriving at the opinion, Piper Jaffray did not perform any appraisals or valuations of any specific assets or liabilities (fixed, contingent or other) of MidWestOne or ATBancorp, and was not furnished or provided with any such appraisals or valuations, nor did Piper Jaffray evaluate the solvency of MidWestOne or ATBancorp under any state or federal law relating to bankruptcy, insolvency or similar matters. The analyses performed by Piper Jaffray in connection with the opinion were going concern analyses. Piper Jaffray expressed no opinion regarding the liquidation value of MidWestOne, ATBancorp or any other entity. Piper Jaffray assumed that there had been no material change in the respective assets, financial condition, results of operations, business or prospects of MidWestOne or ATBancorp since the date of the most recent financial data made available to Piper Jaffray. Piper Jaffray did not: (i) conduct a review of any individual credit files of MidWestOne or ATBancorp, nor did Piper Jaffray evaluate the adequacy of the loan or lease reserves of MidWestOne or ATBancorp, (ii) conduct a review of any credit mark which may be taken in connection with the Merger, nor did Piper Jaffray evaluate the adequacy of any contemplated credit mark to be so taken, or (iii) conduct a review of the collectability of any asset or the future performance of any loan of MidWestOne or ATBancorp. Piper Jaffray assumed, with MidWestOne management's consent, that the respective allowances for loan and lease losses for MidWestOne and ATBancorp, and the credit mark were adequate to cover such losses and would be adequate for MidWestOne on a pro forma basis assuming completion of the Merger. Accordingly, Piper Jaffray expressed no opinion with respect to the foregoing. Without limiting the generality of the foregoing, Piper Jaffray did not undertake an independent analysis of any pending or threatened litigation, regulatory action, possible unasserted claims or other contingent liabilities, to which MidWestOne, ATBancorp or any of their affiliates was a party or may be subject, and at the direction of MidWestOne and with its consent, the Piper Jaffrey Opinion makes no assumption concerning, and therefore did not consider, the possible assertion of claims, outcomes or damages arising out of any such matters. Piper Jaffray also assumed, with MidWestOne management's consent, that neither MidWestOne nor ATBancorp was a party to any material pending transaction, including without limitation any financing, recapitalization, acquisition or merger, divestiture or spin-off, other than the Merger.

No company or transaction used in any analysis for purposes of comparison is identical to MidWestOne, ATBancorp or the contemplated Merger. Accordingly, an analysis of the results of the comparisons is not mathematical; rather, it involves complex considerations and judgments about

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differences in the companies and transactions to which *MidWestOne*, *ATBancorp* and the Merger were compared and other factors that could affect the public trading value or transaction value of the companies.

The Piper Jaffray Opinion was necessarily based upon the information available to Piper Jaffray and facts and circumstances as they existed and were subject to evaluation on the date of the Piper Jaffray Opinion; events occurring after the date of the Piper Jaffray Opinion could materially affect the assumptions used in preparing the Piper Jaffray Opinion. Piper Jaffray did not express any opinion herein as to the price at which shares of *MidWestOne* may trade following announcement of the Merger or at any future time. Piper Jaffray has not undertaken to reaffirm or revise its opinion or otherwise comment upon any events occurring after the date of the Piper Jaffray Opinion and has no obligation to update, revise or reaffirm the Piper Jaffray Opinion.

Piper Jaffray was engaged by *MidWestOne* to act as its financial advisor in connection with the Merger and Piper Jaffray will receive a fee equal to \$1,600,000 from *MidWestOne* upon the successful consummation of the Merger. Piper Jaffray also received a fee of \$200,000 for rendering the Piper Jaffray Opinion, of which \$100,000 will be credited, and thereby reduce, any transaction fee payable. Piper Jaffray's opinion fee is not contingent upon the consummation of the Merger or the conclusions reached in the opinion. *MidWestOne* has also agreed to indemnify Piper Jaffray against certain liabilities and reimburse Piper Jaffray for certain expenses in connection with Piper Jaffray's services.

Piper Jaffray has, in the past, provided financial advisory and financing services to *MidWestOne* and *ATBancorp* and may continue to do so and has received, and may receive, fees for the rendering of such services. In particular, Piper Jaffray expects that it may be retained with respect to the issuance of any debt by *MidWestOne* to take place prior to or contemporaneously with the Merger. In addition, in the ordinary course of business, Piper Jaffray and its affiliates may actively trade securities of *MidWestOne* for its own account or the account of Piper Jaffray's customers and, accordingly, may at any time hold a long or short position in such securities. Piper Jaffray may also, in the future, provide investment banking and financial advisory services to *MidWestOne*, *ATBancorp* or entities that are affiliated with *MidWestOne* or *ATBancorp*, for which Piper Jaffray would expect to receive compensation.

Consistent with applicable legal and regulatory requirements, Piper Jaffray has adopted policies and procedures to establish and maintain the independence of Piper Jaffray's Research Department and personnel. As a result, Piper Jaffray's research analysts may hold opinions, make statements or recommendations, and/or publish research reports with respect to *MidWestOne* and the Merger and other participants in the Merger that differ from the views of Piper Jaffray's investment banking personnel.

The Piper Jaffray Opinion was provided solely to the board of directors of *MidWestOne* in connection with its consideration of the Merger and is not intended to be and does not constitute a recommendation to any shareholder of *MidWestOne* as to how such shareholder should act or vote with respect to the Merger or any other matter. The Piper Jaffray Opinion was approved for issuance by the Piper Jaffray Fairness Opinion Committee.

Set forth below is a summary of the material financial analyses performed by Piper Jaffray in connection with rendering its opinion, as delivered to the *MidWestOne* board of directors in connection with its meeting on August 21, 2018. The order of analyses described does not represent relative importance or weight given to those analyses by Piper Jaffray. Some of the summaries of the financial analyses include information presented in tabular format. To fully understand the summary of the analyses used by Piper Jaffray, the tables must be read together with the text of each summary. The tables alone do not constitute a complete description of the analysis.

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For purposes of its analyses, Piper Jaffray reviewed a number of financial and operating metrics, including:

Summary of Proposal. Piper Jaffray reviewed the financial terms of the Merger. Using a transaction value of \$170.3 million, based on MidWestOne's August 20, 2018 stock price, and a fully diluted number of shares outstanding of ATBancorp common stock provided by ATBancorp management, Piper Jaffray calculated an implied per share Merger consideration of \$4,862.26 per share. In addition to total consideration paid by MidWestOne at closing, on September 24, 2018, ATBancorp paid its shareholders a special cash dividend of \$907.8452 per share. Such dividend represents a portion of the proceeds to ATBancorp from the sale of Heritage Commerce Corp common stock received as consideration in connection with the sale of United American Bank. For purposes of the transaction consideration analysis, all numbers are after payment/deduction of the special cash dividend. In addition, MidWestOne will not acquire the ATB Businesses as part of the Merger. As a condition to Closing, ATBancorp will be required to dispose of an aircraft and the ATB Businesses, with ATBancorp shareholders receiving any net proceeds from the divestiture of the ATB Businesses in the form of an additional special dividend prior to closing. For purposes of the transaction consideration analysis, any special dividend from the net proceeds of this divestiture has been excluded and net income generated by the retirement business has been excluded unless otherwise noted. Based on ATBancorp's most recent publicly filed regulatory financial statements as of June 30, 2018, Piper Jaffray calculated the implied Merger consideration multiples set forth in the table below. The terms used in the table include the following:

Book Value, which means ATBancorp's total shareholders' equity as of June 30, 2018;

Tangible Book Value, which means ATBancorp's total shareholders' equity less the value of any intangible assets, including goodwill, as of June 30, 2018;

Core Deposit Premium, which means the quotient of (i) the implied Merger consideration for ATBancorp, less Tangible Book Value, and (ii) aggregate core deposits (excluding jumbo deposits which are defined as time deposit accounts greater than \$250,000), expressed as a percentage;

Adjusted Annualized Year-to-Date Second Quarter 2018 Earnings, which means ATBancorp's annualized net income for the year-to-date period ended June 30, 2018, adjusted to exclude the gain on sale of United American Bank of \$25.3 million and all impact of such sale, as well as income from ATBancorp's retirement business, and applying opportunity cost to the special dividend;

2018 Estimated Earnings, which mean the earnings estimated by MidWestOne management of ATBancorp performance for calendar 2018, excluding gain on the sale of United American Bank of \$25.3 million and all impact of such sale, as well as income from ATBancorp's retirement business and all impact of such sale, and applying opportunity cost to the special dividend;

2019 Estimated Earnings, which mean the earnings estimated by MidWestOne's management of ATBancorp performance for calendar 2019, excluding ATBancorp's retirement business and applying opportunity cost to the special dividend; and

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2019 Estimated Earnings and Fully Phased-In Cost Saves, which excludes ATBancorp's retirement business and applies opportunity cost to the special dividend.

Price / Book Value	149%
Price / Tangible Book Value	155%
Core Deposit Premium	6.4%
Price / Adjusted Annualized YTD 2Q18 Earnings	18.8x
Price / 2018 Estimated Adjusted Earnings	19.6x
Price / 2019 Estimated Adjusted Earnings	17.8x
Price / 2019 Estimated Earnings + Fully Phased-In Cost Saves	8.1x

Pro Forma Contribution at Announcement. Piper Jaffray analyzed the relative contribution of certain balance sheet and income statement items of MidWestOne and ATBancorp and compared those relative contributions to the implied pro forma ownership of MidWestOne and ATBancorp common shareholders on an as-if 100% stock transaction basis. This analysis excluded any acquisition-related accounting adjustments or cost synergies projected to be achieved through the Merger. The balance sheet items were based on June 30, 2018 financial information. The results of Piper Jaffray's analysis are set forth in the following table:

	MidWestOne as % of Total	ATBancorp as % of Total
BALANCE SHEET		
Total Assets	71.5%	28.5%(1)
Gross Loans	67.6%	32.4%
Deposits	70.9%	29.1%
Noninterest Bearing-Deposits	69.6%	30.4%
Common Equity	75.2%	24.8%(1)
Tangible Common Equity	71.1%	28.9%(1)
PROJECTED INCOME STATEMENT		
2018 Estimated Earnings (excluding Synergies)	79.1%	20.9%
2019 Estimated Earnings (excluding Synergies)	78.4%	21.6%
2020 Estimated Earnings (excluding Synergies)	78.5%	21.5%
Pro Forma Ownership (as-if 100% stock transaction)	70.3%	29.7%
Pro Forma Ownership (proposed deal mix)	74.8%	25.2%

Note: Does not include purchase accounting adjustments.

(1) After payment/deduction of ATBancorp's \$31.8 million special dividend.

ATBancorp Comparable Public Trading Group Analysis. Using publicly available information, Piper Jaffray compared selected financial and market data of ATBancorp with similar data for companies Piper Jaffray deemed comparable to ATBancorp for purposes of its analysis.

The comparable group as determined by Piper Jaffray for purposes of its analysis consisted of banks which are major exchange-traded (NASDAQ or NYSE), excluding mutual holding companies, and are headquartered in Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin with assets between \$750 million and

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\$2.5 billion, and Tangible Common Equity / Tangible Assets less than 15.0%. The group comprised the following companies and is referred to herein as the "ATBancorp Comparable Public Trading Group":

ATBancorp Comparable Public Trading Group

Farmers National Banc Corp.	West Bancorporation, Inc.	MutualFirst Financial, Inc.
First Business Financial Services, Inc.	Macatawa Bank Corporation	Bridgewater Bancshares, Inc.
BankFinancial Corporation	Civista Bancshares, Inc.	County Bancorp, Inc.
Hawthorn Bancshares, Inc.	Ames National Corporation	Level One Bancorp, Inc.
MBT Financial Corp.	Mackinac Financial Corporation	Middlefield Banc Corp.
Farmers & Merchants Bancorp	Limestone Bancorp, Inc.	First Savings Financial Group, Inc.
Ohio Valley Banc Corp.	Landmark Bancorp, Inc.	Citizens Community Bancorp, Inc.
Guaranty Federal Bancshares, Inc.	SB Financial Group, Inc.	HopFed Bancorp, Inc.
United Bancshares, Inc.	First Capital, Inc.	

In all instances, multiples were based on closing stock prices on August 20, 2018. For each of the following analyses performed by Piper Jaffray, financial and market data for the selected companies were based on the selected companies' filings with the SEC and information Piper Jaffray obtained from SNL Financial. The multiples and ratios for each of the selected companies were based on the most recent publicly available information. Throughout Piper Jaffray's analysis of ATBancorp, the high and the low bounds of the ranges presented represented the 75th and 25th percentile values, respectively.

With respect to the ATBancorp Comparable Public Trading Group table below, the information Piper Jaffray presented included the following:

last 12 months core net income (excludes securities gains or losses) divided by average assets, or LTM Core ROAA;

last 12 months core net income (excludes securities gains or losses) divided by average equity, or LTM Core ROAE;

net interest income divided by average earnings assets, or NIM;

noninterest expense divided by operating revenue, or Efficiency Ratio;

nonperforming assets divided by total assets, or NPAs / Assets;

shareholder's equity less intangible assets, goodwill and preferred equity divided by total assets less intangible assets and goodwill, or TCE / TA;

multiple of price to book value, or Price / Book;

multiple of price to tangible book value, or Price / TBV;

multiple of price to consensus analysts' 2018 estimated earnings per share, or Price / 2018E EPS;

multiple of price to year-to-date annualized earnings per share, or Price / YTD Annualized EPS; and

premium over tangible common equity as a percentage of core deposits, or Core Deposit Premium.

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Results of Piper Jaffray's analysis were presented for the ATBancorp Comparable Public Trading Group, as shown in the following table:

ATBancorp Comparable Public Trading Group

	ATBancorp 6/30/18(1)	Deal Multiple(1)	High	Median	Low
LTM Core ROAA	0.67%	n/a	1.29%	1.08%	0.90%
LTM Core ROAE	6.23%	n/a	12.67%	10.28%	9.11%
NIM	2.83%	n/a	3.95%	3.53%	3.37%
Efficiency Ratio	53.3%	n/a	71.8%	66.3%	60.1%
NPAs / Assets	1.15%	n/a	1.22%	0.91%	0.34%
TCE / TA	10.4%	n/a	10.1%	9.2%	8.3%
Price / Book	n/a	1.49x	1.76x	1.48x	1.29x
Price / TBV	n/a	1.55x	1.94x	1.69x	1.41x
Price / '18E EPS	n/a	19.6x	15.6x	14.0x	13.5x
Price / YTD Ann. EPS	n/a	18.8x	17.1x	14.6x	13.5x
Core Deposit Premium	n/a	6.4%	11.3%	7.7%	4.2%

(1) Excludes ATBancorp's \$31.8 million special dividend.

Based on the analysis above, Piper Jaffray then applied the range of multiples to the applicable metrics of ATBancorp. The analysis indicated the following implied values of ATBancorp common stock, as compared to the Merger consideration:

**ATBancorp Implied Per Share Price Based on
Comparable Public Trading Group Multiples
(in millions)**

	Low - High
Price / Book	\$147.4 - \$200.8
Price / TBV	\$155.9 - \$214.2
Price / Adj. Annualized YTD EPS	\$122.4 - \$155.0
Price / 2018E Adjusted Earnings	\$116.8 - \$135.1
Core Deposit Premium	\$149.6 - \$216.8

ATBancorp Comparable M&A Transactions Analysis. Using publicly available information, Piper Jaffray compared the proposed financial terms of the Merger to publicly available financial terms of a group of merger and acquisition transactions selected by Piper Jaffray involving companies in the depository institution industry.

The transactions group selected by Piper Jaffray for purposes of its analysis includes eight selected transactions announced since January 1, 2017 with announced deal values and seller headquartered in Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin with target assets between \$750 million and \$2.5 billion. The group

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comprised the following transactions and is referred to herein as the "ATBancorp Comparable M&A Transactions":

Buyer / Seller

Old National Bancorp/ Klein Financial Inc.
 WesBanco Inc./ Farmers Capital Bank Corp.
 Byline Bancorp Inc./ First Evanston Bancorp Inc.
 Midland States Bancorp Inc./ Alpine Bancorp Inc.
 Old National Bancorp/ Anchor Bancorp Inc.
 National Bank Holdings Corp./ Peoples Inc.
 First Busey Corp./ First Community Financial Partners
 Midland States Bancorp Inc./ Centru Financial Corporation

Note: Excludes Meta Financial Group/Crestmark Bancorp Inc. transaction due to Crestmark's asset-based lending/equipment financing business model.

With respect to the ATBancorp Comparable M&A Transactions, the information Piper Jaffray presented included the following:

LTM ROAA;

NPAs / Assets;

Shareholder's equity less intangible assets and goodwill divided by total assets less intangible assets and goodwill, or TE / TA;

Price / Book;

Price / TBV;

Price / Annualized YTD EPS; and

Core Deposit Premium.

Results of Piper Jaffray's analysis were presented for the ATBancorp Comparable M&A Transactions, as shown in the following table:

ATBancorp Comparable M&A Transactions

	ATBancorp 6/30/18(1)	Deal Multiple(1)	High	Median	Low
LTM ROAA	0.67%	n/a	1.11%	0.88%	0.74%
NPAs / Assets	1.15%	n/a	0.69%	0.65%	0.46%
TE / TA(1)	10.45%	n/a	10.49%	8.91%	8.59%
Price / Book	n/a	1.49x	1.96x	1.74x	1.73x
Price / TBV	n/a	1.55x	1.96x	1.82x	1.73x
Price / Ann. YTD EPS	n/a	18.8x	21.8x	21.0x	17.0x
Core Deposit Premium	n/a	6.4%	11.8%	8.5%	7.4%

(1)

Excludes ATBancorp's \$31.8 million special dividend.

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Based on the analysis above, Piper Jaffray then applied the range of multiples to the applicable metrics of ATBancorp. The analysis indicated the following implied values of ATBancorp common equity, as compared to the Merger consideration:

**ATBancorp Implied Deal Value
Based on Comparable M&A Transaction Group Multiples (at announcement; in millions)**

	Low - High
Price / Book	\$197.3 - \$223.6
Price / TBV	\$190.4 - \$216.2
Price / Adj. Ann. YTD EPS	\$154.6 - \$197.7
Core Deposit Premium	\$180.1 - \$220.5

ATBancorp Discounted Cash Flow Analysis. Piper Jaffray calculated a range of implied values for ATBancorp common stock by estimating the present value of cash flows ATBancorp could provide to holders of ATBancorp common stock through 2023 and using the terminal multiple approach to determine a terminal value. Piper Jaffray calculated two separate analyses, a discounted cash flow standalone analysis and a discounted cash flow analysis with Synergies.

The following assumptions were used in the standalone analysis:

Removes retirement business income;

ATBancorp financial forecasts from 2018 - 2023 estimated by MidWestOne management;

Maintenance of a 9.00% tangible common equity-to-tangible asset ratio;

Discount rates range from 11.5% to 13.5%;

Terminal multiple applied to final year (2023) earnings ranged from 13.0x to 15.0x; and

Asset growth of 2.5% from 2018-2022.

The standalone discounted cash flow calculations resulted in the below valuation ranges:

Standalone Discounted Cash Flow Analysis

Discount Rate	Terminal Multiple (Fwd. P/E)		
	13.0x	14.0x	15.0x
11.5%	\$ 103.8mm	\$ 110.7mm	\$ 117.5mm
12.5%	\$ 99.9mm	\$ 106.4mm	\$ 113.0mm
13.5%	\$ 96.1mm	\$ 102.4mm	\$ 108.7mm

The following assumptions were used in the discounted cash flow analysis with Synergies analysis:

All other assumptions from standalone discounted cash flow analysis held equal;

Cost savings of 30% of noninterest expense;

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75% phased in 2019, 100% thereafter

Fair market value adjustments of \$4.8 million; and

After-tax transaction expenses of \$16.9 million.

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The discounted cash flow with synergies calculations resulted in the below valuation ranges:

Discounted Cash Flow Analysis with Synergies

Discount Rate	Terminal Multiple (Fwd. P/E)		
	13.0x	14.0x	15.0x
11.5%	\$ 227.0mm	\$ 241.6mm	\$ 256.2mm
12.5%	\$ 218.5mm	\$ 232.5mm	\$ 246.5mm
13.5%	\$ 210.3mm	\$ 223.8mm	\$ 237.2mm

The discounted cash flow analysis is a widely used valuation methodology that relies on numerous assumptions, including asset growth rates, earnings growth rates, discount rates, and terminal multiples, and the results of such methodology are highly dependent on these assumptions. Except for the ATBancorp financial forecasts from 2018-2023 estimated by MidWestOne management, these other assumptions were determined by Piper Jaffray and reviewed with MidWestOne management for purposes of its discounted cash flow analysis. The analysis does not purport to be indicative of the actual values or expected values of ATBancorp.

MidWestOne Comparable Public Trading Group Analysis. Using publicly available information, Piper Jaffray compared selected financial and market data of MidWestOne with similar data for companies Piper Jaffray deemed comparable to MidWestOne for purposes of its analysis.

The comparable group as determined by Piper Jaffray for purposes of its analysis consisted of banks which are major exchange traded (NASDAQ or NYSE), excluding mutual holding companies, and are headquartered in Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin with assets between \$2 billion and \$5 billion. The group comprised the following companies and is referred to herein as the "MidWestOne Comparable Public Trading Group":

MidWestOne Comparable Public Trading Group

Byline Bancorp, Inc.	Lakeland Financial Corporation	Great Southern Bancorp, Inc.
Community Trust Bancorp, Inc.	QCR Holdings, Inc.	Horizon Bancorp, Inc.
Peoples Bancorp Inc.	Merchants Bancorp	Equity Bancshares, Inc.
First Mid-Illinois Bancshares, Inc.	German American Bancorp, Inc.	Stock Yards Bancorp, Inc.
Mercantile Bank Corporation	Independent Bank Corporation	Sterling Bancorp, Inc.
First Defiance Financial Corp.	First Financial Corporation	Nicolet Bankshares, Inc.
United Community Financial Corp.	Old Second Bancorp, Inc.	Farmers National Banc Corp.
West Bancorporation, Inc.	MutualFirst Financial, Inc.	

Note: Removed First Internet Bancorp (Internet banking business model) and Meta Financial Group, Inc. (Prepaid card business model).

In all instances, multiples were based on closing stock prices on August 20, 2018. For each of the following analyses performed by Piper Jaffray, financial and market data and earnings per share estimates for the selected companies were based on the selected companies' filings with the SEC and information Piper Jaffray obtained from SNL Financial. The multiples and ratios for each of the selected companies were based on the most recent publicly available information. Throughout Piper Jaffray's analysis of MidWestOne the high and the low bounds of the ranges presented represented the 75th and 25th percentile values, respectively.

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With respect to the MidWestOne Comparable Public Trading Group, the information Piper Jaffray presented included the following:

Most Recent Quarter Core ROAA;

Most Recent Quarter Core ROAE;

NIM;

Efficiency Ratio;

NPAs / Assets;

TCE / TA;

Price / Book;

Price / TBV;

Price / Estimated 2018 EPS;

Price / Estimated 2019 EPS; and

Core Deposit Premium.

Results of Piper Jaffray's analysis were presented for the MidWestOne Comparable Public Trading Group, as shown in the following table, in which MidWestOne's \$32.92 per share market valuation on August 20, 2018 is used to calculate the implied MidWestOne multiples:

MidWestOne Comparable Public Trading Group

	MidWestOne 6/30/18	High	Median	Low
MRQ Core ROAA	1.06%	1.50%	1.39%	1.32%
MRQ Core ROAE	10.07%	14.73%	12.21%	11.53%
NIM	3.74%	3.91%	3.75%	3.64%
Efficiency Ratio	59%	60%	59%	56%
NPAs / Assets	0.67%	0.84%	0.57%	0.37%
TCE / TA	8.5%	10.0%	9.4%	8.6%
Price / Book	1.16x	2.07x	1.71x	1.55x
Price / TBV	1.49x	2.31x	2.10x	1.90x
Price / Estimated 2018 EPS	12.3x	15.2x	14.6x	13.8x
Price / Estimated 2019 EPS	11.6x	14.4x	13.3x	12.5x
Core Deposit Premium	5.5%	15.2%	12.4%	11.4%

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Based on the analysis above, Piper Jaffray then applied the range of multiples to the applicable metrics of MidWestOne. The analysis indicated the following implied equity values per share of MidWestOne common stock:

**MidWestOne Implied Per Share Price based on
Comparable Public Trading Group Multiples**

	Low - High
Price / Book	\$44.01 - \$58.77
Price / TBV	\$41.97 - \$51.13
Price / 2018 Estimated EPS	\$37.11 - \$40.69
Price / 2019 Estimated EPS	\$35.61 - \$40.78
Core Deposit Premium	\$44.41 - \$51.85

MidWestOne Discounted Cash Flow Analysis. Piper Jaffray calculated a range of implied values for MidWestOne common stock by estimating the present value of cash flows MidWestOne could provide to common equity holders through 2023 and using the terminal multiples approach to determine a terminal value. The following assumptions were used:

financial forecasts from 2018 - 2020 per consensus analyst estimates;

2021+ earnings growth rate of 8.0%;

2018 - 2022 asset growth rate of 5.0%;

maintenance of a 9.00% tangible common equity-to-tangible asset ratio;

discount rates range from 11.5% to 13.5%; and

terminal multiple applied to final year (2023) earnings ranged from 13.5x to 15.5x.

The discounted cash flow calculations resulted in the below valuation ranges:

Discount Rate	Terminal Multiple (Fwd P/E)		
	13.5x	14.5x	15.5x
11.5%	\$ 37.21	\$ 39.56	\$ 41.92
12.5%	\$ 35.81	\$ 38.08	\$ 40.34
13.5%	\$ 34.48	\$ 36.66	\$ 38.83

The discounted cash flow analysis is a widely used valuation methodology that relies on numerous assumptions, including asset growth rates, earnings growth rates, discount rates, and terminal multiples, and the results of such methodology are highly dependent on these assumptions. These assumptions were determined by Piper Jaffray and reviewed with MidWestOne management, for purposes of its discounted cash flow analysis. The analysis does not purport to be indicative of the actual values or expected values of MidWestOne. In addition, the analysis relates only to the potential value achieved by MidWestOne as a stand-alone entity based on assumptions described herein. Therefore, the analysis is not intended to, and does not purport to, reflect values achieved on a post-Merger basis.

The foregoing summary of certain material financial analyses does not purport to be a complete description of the analyses or data presented by Piper Jaffray. The preparation of a fairness opinion is a complex process and is not necessarily susceptible to partial analysis or summary description. Piper Jaffray believes that the foregoing summary and its analyses must be considered as a whole and that selecting portions of the foregoing summary and these analyses, without considering all of its analyses as a whole, including the methodologies and assumptions underlying the analyses, could create a misleading or incomplete view of the processes underlying the analyses and its opinion. In arriving at

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its opinion, Piper Jaffray did not attribute any particular weight to any analyses or factors considered by it and did not form an opinion as to whether any individual analysis or factor (positive or negative), considered in isolation, supported or failed to support its opinion. Rather, Piper Jaffray considered the totality of the factors and analyses performed in determining its opinion. In performing its analyses, Piper Jaffray made numerous assumptions with respect to industry performance, general business, economic, monetary, regulatory, market and other conditions and other matters, many of which are beyond *MidWestOne's*, *ATBancorp's*, or Piper Jaffray's control. In addition, analyses based upon forecasts of future results are inherently uncertain, as they are subject to numerous factors or events beyond the control of the parties and their advisors. Accordingly, forecasts and the analyses used or performed by Piper Jaffray are not necessarily indicative of actual future results, which may be significantly more or less favorable than suggested by those analyses. Moreover, Piper Jaffray's analyses are not and do not purport to be appraisals or otherwise reflective of the prices at which businesses actually could be bought or sold, and the range of valuations resulting from any individual analysis described above should not be taken to be Piper Jaffray's view of *MidWestOne's* or *ATBancorp's* actual value. None of the selected companies reviewed is identical to *MidWestOne* or *ATBancorp*. However, the companies selected were chosen because they are publicly traded companies with operations and businesses that Piper Jaffray considered to be similar to those of *MidWestOne* or *ATBancorp*, as applicable, for purposes of its analysis. The analyses necessarily involve complex considerations and judgments concerning differences in financial and operational characteristics of the companies involved and other factors that could affect the companies compared to *MidWestOne* or *ATBancorp*, as applicable. The analyses of Piper Jaffray and its opinion were among a number of factors taken into consideration by the board of directors of *MidWestOne* in making its determination to approve the Merger Agreement and the transactions contemplated thereby, and the analyses described above should not be viewed as determinative of the decision of the *MidWestOne* board of directors to approve the Merger Agreement and the transactions contemplated thereby.

Recommendation of the ATBancorp Board of Directors and Reasons for the Merger

After careful consideration, the *ATBancorp* board of directors, at a special meeting held on August 20, 2018, unanimously determined that the Merger Agreement is advisable and in the best interests of *ATBancorp* and its shareholders. Accordingly, *ATBancorp's* board of directors approved the Merger Agreement and unanimously recommends that *ATBancorp* shareholders vote "FOR" the approval of the Merger Agreement and the transactions contemplated thereby. In reaching its decision to approve the Merger Agreement, the Merger and the other transactions contemplated by the Merger Agreement, and to recommend that its shareholders approve and adopt the Merger Agreement and the transactions contemplated thereby, the *ATBancorp* board of directors consulted with *ATBancorp* management, as well as its financial and legal advisors, and considered many factors, including the following:

the understanding of *ATBancorp's* board of directors of the strategic options available to *ATBancorp* and the board of directors' assessment of those options with respect to the prospects and estimated results of the execution by *ATBancorp* of its business plan as an independent entity under various scenarios, and the determination that none of those options or the execution of the business plan were more likely to create greater present value for *ATBancorp's* shareholders than the value to be paid by *MidWestOne*;

the financial and other terms of the Merger Agreement, including the price to be paid for the shares of *ATBancorp* common stock, and the form and mix of consideration to be received by *ATBancorp* shareholders;

each of *ATBancorp's*, *MidWestOne's* and the combined company's business, operations, management, financial condition, asset quality, earnings and prospects. In reviewing these factors, the *ATBancorp* board of directors considered its view that *MidWestOne's* business and

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operations complement those of ATBancorp and that the Merger would result in a combined company with diversified revenue sources, a well-balanced loan portfolio and an attractive funding base;

the increased liquidity of the *MidWestOne* common stock as listed on Nasdaq, contrasted with the absence of a public market for ATBancorp common stock;

the expectation that ATBancorp shareholders would have the opportunity to participate in future growth of the combined company;

the potential for stock appreciation in the combined company for ATBancorp shareholders;

that ATBancorp would receive two seats on a 14 member board of directors of the combined company;

that ATBancorp is permitted to pay special dividends to ATBancorp shareholders prior to completing the Merger, as more fully described below in the section entitled " Special Dividends";

the ability to become part of a larger institution with a higher lending limit and the infrastructure for growth, helping to further service ATBancorp's customer base;

the opportunities for advancement in the combined company for existing ATBancorp employees;

its understanding of the current and prospective environment in which ATBancorp and *MidWestOne* operate, including national and local economic conditions, the interest rate environment, increasing operating costs resulting from regulatory initiatives and compliance mandates continued consolidation in the industry, the competitive environment for financial institutions generally, and the likely effect of these factors on ATBancorp both with and without the proposed transaction;

its review and discussions with ATBancorp's management concerning the due diligence investigation of *MidWestOne*;

MidWestOne's reputation in the communities that it serves and *MidWestOne's* familiarity with the Iowa market;

the financial presentation and opinion of Sandler O'Neill, ATBancorp's financial advisor, delivered on August 20, 2018 to the ATBancorp board of directors, and subsequently confirmed in writing, to the effect that, as of that date, and based upon and subject to the various factors, assumptions and limitations set forth in such opinion, the per share Merger consideration to be paid to holders of ATBancorp common stock in the Merger was fair, from a financial point of view, to such holders, as more fully described below in the section entitled " Opinion of ATBancorp's Financial Advisor"; and

the expected tax treatment of the Merger Agreement as a tax-free reorganization under the Internal Revenue Code.

The ATBancorp board of directors also considered a number of potential risks and uncertainties associated with the Merger in connection with its deliberation of the proposed transaction, including, without limitation, the following:

the potential risk of diverting management attention and resources from the day-to-day operation of ATBancorp's business and towards the completion of the Merger;

the risks associated with selling an aircraft and the ATB Businesses, which is a closing condition pursuant to the Merger Agreement;

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the potential risks associated with achieving anticipated cost synergies and savings and successfully integrating MidWestOne's business, operations and workforce with those of ATBancorp;

the regulatory and other approvals required in connection with the Merger and the expectation that such regulatory approvals will be received in a timely manner and without the imposition of unacceptable conditions;

the possibility that the Merger might not be consummated and the effect of the resulting public announcement of the termination of the Merger on, among other things, the operations of ATBancorp;

the potential risks associated with a portion of the Merger consideration being paid through the issuance of a fixed number of shares of MidWestOne common stock and any decrease in the market price of MidWestOne common stock will result in a reduction in the aggregate Merger consideration received by ATBancorp shareholders, subject to adjustment as described above in the section entitled " Merger Consideration";

the restrictions in the Merger Agreement regarding the operation of ATBancorp's business through completion of the Merger which may prevent or delay ATBancorp from undertaking business opportunities that may arise prior to completion of the Merger;

that MidWestOne has a right to a \$7,600,000 termination fee plus up to \$1,000,000 of expenses if the Merger Agreement is terminated in certain circumstances; and

that ATBancorp shareholders will not necessarily know or be able to calculate the actual value of the Merger consideration which they would receive upon completion of the Merger.

The directors of ATBancorp based their recommendation to shareholders on the totality of the information provided to them and did not assign any relative or specific weights to the factors considered. Individual directors may have given differing weights to different factors.

Certain of ATBancorp's directors and executive officers have financial interests in the Merger that are different from, or in addition to, those of ATBancorp's shareholders generally. The ATBancorp board of directors was aware of and considered these potential interests, among other matters, in evaluating the Merger and in making its recommendation to ATBancorp shareholders. For a discussion of these interests, see "Interests of ATBancorp Directors and Executive Officers in the Merger" on page 102.

This explanation of ATBancorp's reasons for the Merger and other information presented in this section is forward-looking in nature and should be read in light of the section entitled "Cautionary Statement Regarding Forward-Looking Statements" beginning on page 51.

For the reasons set forth above, the ATBancorp board of directors has approved the Merger Agreement and the transactions contemplated thereby and recommends that you vote "FOR" the ATBancorp merger proposal and "FOR" the ATBancorp adjournment proposal (if necessary or appropriate).

In connection with entering into the Merger Agreement, MidWestOne entered into the Voting Agreement with certain holders of ATBancorp common stock. The shareholders that are party to the Voting Agreement beneficially own in the aggregate 62.41% of the outstanding shares of ATBancorp common stock. Therefore, approval of the ATBancorp merger proposal is virtually assured. The Voting Agreement requires that the shareholders party thereto vote all of their shares of ATBancorp common stock in favor of the Merger and against alternative acquisition proposals. The Voting Agreement will terminate upon the first to occur of (a) the Effective Time; (b) the date, if any, on which ATBancorp publicly discloses that its board of directors has withdrawn, qualified or adversely modified its

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recommendation to its shareholders that its shareholders vote in favor of the approval or adoption of the Merger Agreement, in each case because its board of directors has determined in good faith, after consultation with outside counsel, that the taking of such action is reasonably necessary for it to comply with its fiduciary duties under applicable law; (c) the termination of the Merger Agreement pursuant to its terms; or (d) August 21, 2020.

Opinion of ATBancorp's Financial Advisor

ATBancorp retained Sandler O'Neill to act as financial advisor to ATBancorp's board of directors in connection with ATBancorp's consideration of a possible business combination. Sandler O'Neill is a nationally recognized investment banking firm whose principal business specialty is financial institutions. In the ordinary course of its investment banking business, Sandler O'Neill is regularly engaged in the valuation of financial institutions and their securities in connection with mergers and acquisitions and other corporate transactions.

Sandler O'Neill acted as financial advisor in connection with the proposed transaction and participated in certain of the negotiations leading to the execution of the Merger Agreement. At the August 20, 2018 meeting at which ATBancorp's board of directors considered and discussed the terms of the Merger Agreement and the Merger, Sandler O'Neill delivered to ATBancorp's board of directors its oral opinion, which was subsequently confirmed in writing on August 20, 2018, to the effect that, as of such date, the per share Merger consideration to be received by holders of ATBancorp common stock in the Merger was fair to the holders of ATBancorp common stock, from a financial point of view. **The full text of Sandler O'Neill's opinion is attached as Appendix D to this joint proxy statement/prospectus. The opinion outlines the procedures followed, assumptions made, matters considered and qualifications and limitations on the review undertaken by Sandler O'Neill in rendering its opinion. The description of the opinion set forth below is qualified in its entirety by reference to the full text of the opinion. Holders of ATBancorp common stock are urged to read the entire opinion carefully in connection with their consideration of the proposed Merger.**

Sandler O'Neill's opinion speaks only as of the date of the opinion. The opinion was directed to ATBancorp's board of directors in connection with its consideration of the Merger Agreement and the Merger and does not constitute a recommendation to any shareholder of ATBancorp as to how any such shareholder should vote at any meeting of shareholders called to consider and vote upon the approval of the Merger Agreement and the Merger. Sandler O'Neill's opinion was directed only to the fairness, from a financial point of view, of the Merger consideration to the holders of ATBancorp common stock and does not address the underlying business decision of ATBancorp to engage in the Merger, the form or structure of the Merger or any other transactions contemplated in the Merger Agreement, the relative merits of the Merger as compared to any other alternative transactions or business strategies that might exist for ATBancorp or the effect of any other transaction in which ATBancorp might engage. Sandler O'Neill did not express any opinion as to the fairness of the amount or nature of the compensation to be received in the Merger by any officer, director or employee of ATBancorp or MidWestOne, or any class of such persons, if any, relative to the compensation to be received in the Merger by any other shareholder. Sandler O'Neill's opinion was approved by its fairness opinion committee.

In connection with its opinion, Sandler O'Neill reviewed and considered, among other things:

a draft of the Merger Agreement, dated August 20, 2018;

certain publicly available financial statements and other historical financial information of ATBancorp that Sandler O'Neill deemed relevant;

certain publicly available financial statements and other historical financial information of MidWestOne that Sandler O'Neill deemed relevant;

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certain internal financial projections for ATBancorp for the years ending December 31, 2018 through December 31, 2022, as provided by the senior management of ATBancorp;

publicly available consensus median analyst earnings per share estimates for MidWestOne for the years ending December 31, 2018 through December 31, 2020 and publicly available consensus median analyst estimated long-term earnings per share growth rate for the years ending December 31, 2021 through December 31, 2023, as well as publicly available consensus median analyst dividends per share for the years ending December 31, 2018 and December 31, 2019 and an estimated long-term dividend growth rate for the years ending December 31, 2020 through December 31, 2023, as reviewed with the senior management of MidWestOne;

the pro forma financial impact of the Merger on MidWestOne based on certain assumptions relating to transaction expenses, purchase accounting adjustments and cost savings, as well as certain assumptions relating to the payment of a special dividend to the holders of ATBancorp common stock, the divestiture of ATBancorp's retirement business and the offer and sale by MidWestOne of a certain amount of subordinated debt concurrent with the closing of the Merger, as provided by the senior management of MidWestOne (collectively, the "Pro Forma Assumptions");

the publicly reported historical price and trading activity for MidWestOne common stock, including a comparison of certain stock market information for MidWestOne common stock and the NASDAQ Bank index as well as publicly available information for certain other similar companies, the securities of which are publicly traded;

a comparison of certain financial information for ATBancorp and MidWestOne with similar financial institutions for which information is publicly available;

the financial terms of certain recent business combinations in the bank and thrift industry (on a regional and nationwide basis), to the extent publicly available;

the current market environment generally and the banking environment in particular; and

such other information, financial studies, analyses and investigations and financial, economic and market criteria as Sandler O'Neill considered relevant.

Sandler O'Neill also discussed with certain members of the senior management of ATBancorp the business, financial condition, results of operations and prospects of ATBancorp and held similar discussions with certain members of the senior management of MidWestOne and its representatives regarding the business, financial condition, results of operations and prospects of MidWestOne.

In performing its review, Sandler O'Neill relied upon the accuracy and completeness of all of the financial and other information that was available to and reviewed by Sandler O'Neill from public sources, that was provided to Sandler O'Neill by ATBancorp or MidWestOne or their respective representatives or that was otherwise reviewed by Sandler O'Neill, and Sandler O'Neill assumed such accuracy and completeness for purposes of rendering its opinion without any independent verification or investigation. Sandler O'Neill relied on the assurances of the respective managements of ATBancorp and MidWestOne that they were not aware of any facts or circumstances that would have made any of such information inaccurate or misleading. Sandler O'Neill was not asked to and did not undertake an independent verification of any of such information and Sandler O'Neill did not assume any responsibility or liability for the accuracy or completeness thereof. Sandler O'Neill did not make an independent evaluation or perform an appraisal of the specific assets, the collateral securing assets or the liabilities (contingent or otherwise) of ATBancorp or MidWestOne or any of their respective subsidiaries, nor was Sandler O'Neill furnished with any such evaluations or appraisals. Sandler O'Neill rendered no opinion or evaluation on the collectability of any assets or the future performance of any loans of ATBancorp or MidWestOne. Sandler O'Neill did not make an independent evaluation of the

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adequacy of the allowance for loan losses of ATBancorp or MidWestOne, or of the combined entity after the Merger, and Sandler O'Neill did not review any individual credit files relating to ATBancorp or MidWestOne. Sandler O'Neill assumed, with ATBancorp's consent, that the respective allowances for loan losses for both ATBancorp and MidWestOne were adequate to cover such losses and would be adequate on a pro forma basis for the combined entity.

In preparing its analyses, Sandler O'Neill used certain internal financial projections for ATBancorp for the years ending December 31, 2018 through December 31, 2022, as provided by the senior management of ATBancorp. In addition, Sandler O'Neill used publicly available consensus median analyst earnings per share estimates for MidWestOne for the years ending December 31, 2018 through December 31, 2020 and publicly available consensus median analyst estimated long-term earnings per share growth rate for the years ending December 31, 2021 through December 31, 2023, as well as publicly available consensus median analyst dividends per share for the years ending December 31, 2018 and December 31, 2019 and an estimated long-term dividend growth rate for the years ending December 31, 2020 through December 31, 2023, as reviewed with the senior management of MidWestOne. Sandler O'Neill also received and used in its pro forma analyses the Pro Forma Assumptions, as provided by the senior management of MidWestOne. With respect to the foregoing information, the respective senior managements of ATBancorp and MidWestOne confirmed to Sandler O'Neill that such information reflected (or, in the case of the publicly available consensus mean analyst estimates referred to above, were consistent with) the best currently available projections, estimates and judgments of those respective senior managements as to the future financial performance of ATBancorp and MidWestOne, respectively, and the other matters covered thereby, and Sandler O'Neill assumed that the future financial performance reflected in such information would be achieved. Sandler O'Neill expressed no opinion as to such information, or the assumptions on which such information was based. Sandler O'Neill also assumed that there had been no material change in the respective assets, financial condition, results of operations, business or prospects of ATBancorp or MidWestOne since the date of the most recent financial statements made available to Sandler O'Neill. Sandler O'Neill assumed in all respects material to its analysis that ATBancorp and MidWestOne would remain as going concerns for all periods relevant to its analysis.

Sandler O'Neill also assumed, with ATBancorp's consent, that (i) each of the parties to the Merger Agreement would comply in all material respects with all material terms and conditions of the Merger Agreement and all related agreements, that all of the representations and warranties contained in such agreements were true and correct in all material respects, that each of the parties to such agreements would perform in all material respects all of the covenants and other obligations required to be performed by such party under such agreements and that the conditions precedent in such agreements were not and would not be waived, (ii) in the course of obtaining the necessary regulatory or third party approvals, consents and releases with respect to the Merger, no delay, limitation, restriction or condition would be imposed that would have an adverse effect on ATBancorp, MidWestOne or the Merger or any related transaction, and (iii) the Merger and any related transactions would be consummated in accordance with the terms of the Merger Agreement without any waiver, modification or amendment of any material term, condition or agreement thereof and in compliance with all applicable laws and other requirements. Finally, with ATBancorp's consent, Sandler O'Neill relied upon the advice that ATBancorp received from its legal, accounting and tax advisors as to all legal, accounting and tax matters relating to the Merger and the other transactions contemplated by the Merger Agreement. Sandler O'Neill expressed no opinion as to any such matters.

Sandler O'Neill's opinion was necessarily based on financial, regulatory, economic, market and other conditions as in effect on, and the information made available to Sandler O'Neill as of, the date of the opinion. Events occurring after the date of Sandler O'Neill's opinion could materially affect the opinion. Sandler O'Neill has not undertaken to update, revise, reaffirm or withdraw its opinion or otherwise comment upon events occurring after the date of its opinion. Sandler O'Neill expressed no

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opinion as to the trading value of MidWestOne common stock at any time or what the value of MidWestOne common stock would be once it is actually received by the holders of ATBancorp common stock.

In rendering its opinion, Sandler O'Neill performed a variety of financial analyses. The summary below is not a complete description of the analyses underlying Sandler O'Neill's opinion or the presentation made by Sandler O'Neill to ATBancorp's board of directors, but is a summary of all material analyses performed and presented by Sandler O'Neill. The summary includes information presented in tabular format. **In order to fully understand the financial analyses, these tables must be read together with the accompanying text. The tables alone do not constitute a complete description of the financial analyses.** The preparation of a fairness opinion is a complex process involving subjective judgments as to the most appropriate and relevant methods of financial analysis and the application of those methods to the particular circumstances. The process, therefore, is not necessarily susceptible to a partial analysis or summary description. Sandler O'Neill believes that its analyses must be considered as a whole and that selecting portions of the factors and analyses to be considered without considering all factors and analyses, or attempting to ascribe relative weights to some or all such factors and analyses, could create an incomplete view of the evaluation process underlying its opinion. Also, no company included in Sandler O'Neill's comparative analyses described below is identical to ATBancorp or MidWestOne and no transaction is identical to the Merger. Accordingly, an analysis of comparable companies or transactions involves complex considerations and judgments concerning differences in financial and operating characteristics of the companies and other factors that could affect the public trading values or merger transaction values, as the case may be, of ATBancorp and MidWestOne and the companies to which they are being compared. In arriving at its opinion, Sandler O'Neill did not attribute any particular weight to any analysis or factor that it considered. Rather, Sandler O'Neill made qualitative judgments as to the significance and relevance of each analysis and factor. Sandler O'Neill did not form an opinion as to whether any individual analysis or factor (positive or negative) considered in isolation supported or failed to support its opinion, rather, Sandler O'Neill made its determination as to the fairness of the per share Merger consideration on the basis of its experience and professional judgment after considering the results of all its analyses taken as a whole.

In performing its analyses, Sandler O'Neill also made numerous assumptions with respect to industry performance, business and economic conditions and various other matters, many of which are beyond the control of ATBancorp, MidWestOne and Sandler O'Neill. The analyses performed by Sandler O'Neill are not necessarily indicative of actual values or future results, both of which may be significantly more or less favorable than suggested by such analyses. Sandler O'Neill prepared its analyses solely for purposes of rendering its opinion and provided such analyses to ATBancorp's board of directors at its August 20, 2018 meeting. Estimates on the values of companies do not purport to be appraisals or necessarily reflect the prices at which companies or their securities may actually be sold. Such estimates are inherently subject to uncertainty and actual values may be materially different. Accordingly, Sandler O'Neill's analyses do not necessarily reflect the value of ATBancorp common shares or the prices at which ATBancorp common shares or MidWestOne shares may be sold at any time. The analyses of Sandler O'Neill and its opinion were among a number of factors taken into consideration by ATBancorp's board of directors in making its determination to approve the Merger Agreement and the transactions contemplated thereby and should not be viewed as determinative of the per share Merger consideration or the decision of ATBancorp's board of directors or management with respect to the fairness of the Merger. The type and amount of consideration payable in the Merger were determined through negotiations between ATBancorp and MidWestOne.

Summary of Aggregate Merger Consideration and Implied Transaction Metrics

Sandler O'Neill reviewed the financial terms of the Merger. Pursuant to the terms of the Merger Agreement, each share of common stock of ATBancorp outstanding immediately before the Effective

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Time, except for certain shares of ATBancorp common stock as specified in the Merger Agreement, will be converted into the right to receive (i) an amount of cash equal to \$992.51, and (ii) 117.5500 shares of MidWestOne common stock. In addition, as set forth in greater detail in the Merger Agreement and subject to ATBancorp's compliance with certain requirements, ATBancorp is permitted to declare and pay a one-time special dividend to holders of ATBancorp common stock in an aggregate amount equal to \$907.8452 per share at a time prior to the closing of the Merger as determined by ATBancorp. Sandler O'Neill assumed for purposes of its analyses, as directed by the senior management of ATBancorp, that ATBancorp would pay this special dividend to holders of ATBancorp common stock prior to the closing of the Merger. Based on the closing price of MidWestOne common stock on August 17, 2018 of \$33.50 per share and based upon 35,028 ATBancorp common shares outstanding, Sandler O'Neill calculated an aggregate implied transaction value of \$204.5 million, or a transaction price per share of approximately \$5,838.28. Based upon historical financial information for ATBancorp as of or for the last 12 months ("LTM") and as of or for the year to date ("YTD") ended June 30, 2018, historical financial information for the LTM and YTD periods are adjusted to remove impact from ATBancorp's sale of a \$320 million asset bank subsidiary, United American Bank on May 4, 2018, as well as the proceeds from the sale, as provided by the senior management of ATBancorp, Sandler O'Neill calculated the following implied transaction metrics:

Transaction Value / ATBancorp Last 12 Months' Core Earnings:	16.9x
Transaction Value / ATBancorp Year-to-Date Annualized Earnings:	17.1x
Transaction Value / ATBancorp 2018E Earnings(1):	15.5x
Transaction Value / ATBancorp 2019E Earnings(1):	14.1x
Transaction Value / ATBancorp June 30, 2018 Book Value:	140%
Transaction Value / ATBancorp June 30, 2018 Adjusted Book Value(2):	151%
Transaction Value / ATBancorp June 30, 2018 Tangible Book Value:	144%
Transaction Value / ATBancorp June 30, 2018 Adjusted Tangible Book Value(2):	157%
Tangible Book Premium / Core Deposits (excludes time deposits > \$100k)(3):	6.7%
Tangible Book Premium / Core Deposits (excludes time deposits > \$250k)(4):	6.4%
Adjusted Tangible Book Premium(2) / Core Deposits (excludes time deposits > \$100k)(3):	6.7%
Adjusted Tangible Book Premium(2) / Core Deposits (excludes time deposits > \$250k)(4):	6.4%

- (1) As provided by ATBancorp senior management
- (2) Adjusted tangible book value equals June 30, 2018 Tangible Common Equity less special dividend of \$31.8 million; \$31.8 million dividend is also reduced from the aggregate consideration
- (3) Core deposits defined as total deposits, less time deposit accounts with a balance of at least \$100,000 & brokered deposits
- (4) Core deposits defined as total deposits, less time deposit accounts with a balance of at least \$250,000 & brokered deposits

Stock Trading History

Sandler O'Neill reviewed the historical stock price performance of MidWestOne common stock for the three-year period August 17, 2018. Sandler O'Neill then compared the relationship between the stock price performance of MidWestOne's shares to movements in the MidWestOne Peer Group (as described below) as well as certain stock indices.

Table of Contents**MidWestOne Three-Year Stock Price Performance**

	August 17, 2015	August 17, 2018
MidWestOne	100%	105.6%
MidWestOne Peer Group	100%	176.7%
NASDAQ Bank Index	100%	147.2%

Comparable Company Analyses

Sandler O'Neill used publicly available information to compare selected financial information for ATBancorp with a group of financial institutions selected by Sandler O'Neill (the "ATBancorp Peer Group"). The ATBancorp Peer Group consisted of major exchange traded banks and thrifts headquartered in the Midwest region with total assets between \$1.0 billion and \$2.0 billion, excluding announced merger targets and mutual holding companies. The ATBancorp Peer Group consisted of the following companies:

Ames National Corporation	LCNB Corp.
BankFinancial Corporation	Level One Bancorp, Inc.
Bridgewater Bancshares, Inc.	Limestone Bancorp, Inc.
Civista Bancshares, Inc.	Macatawa Bank Corporation
County Bancorp, Inc.	Mackinac Financial Corporation
Farmers & Merchants Bancorp, Inc.	MBT Financial Corp.
First Business Financial Services, Inc.	Middlefield Banc Corp.
First Savings Financial Group, Inc.	Ohio Valley Banc Corp.
Hawthorn Bancshares, Inc.	Southern Missouri Bancorp, Inc.
	Waterstone Financial, Inc.

The analysis compared publicly available financial information for ATBancorp as of or for the 12 months ended June 30, 2018 with the corresponding publicly available data for the ATBancorp Peer Group as of or for the 12 months ended June 30, 2018, with pricing data as of August 17, 2018. The table below sets forth the data for ATBancorp and the high, low, median and mean data for the ATBancorp Peer Group.

Table of Contents**ATBancorp Comparable Company Analysis**

	ATBancorp(1)	ATBancorp Peer Group Median	ATBancorp Peer Group Mean	ATBancorp Peer Group High	ATBancorp Peer Group Low
Total Assets (\$mm)	1,369	1,449	1,456	1,900	1,025
Loans / Deposits (%)	105.0	97.6	94.0	134.8	64.6
Non-performing Assets / Total Assets (%) ⁽²⁾	0.61	0.45	0.67	2.30	0.05
Tangible Common Equity / Tangible Assets (%)	10.4	9.7	10.4	21.5	6.4
Tier 1 Risk-based Capital Ratio (%)	13.1	12.7	13.8	28.6	9.3
Total Risk-based Capital Ratio (%)	15.3	15.5	15.2	29.5	11.8
YTD Return on Average Assets (%)	0.90	1.17	1.11	1.79	0.37
YTD Return on Average Tangible Common Equity (%)	8.9	12.0	11.3	14.8	5.2
YTD Net Interest Margin (%)	2.69	3.71	3.65	4.37	2.91
YTD Efficiency Ratio (%)	74.2	64.6	64.0	76.3	40.0
Price / Tangible Book Value (%)		170	174	305	119
Price / YTD Ann. Earnings per Share (x)		14.4	15.8	30.0	8.3
Price / 2018 Est. Earnings per Share (x)		14.7	15.9	26.6	11.7
Price / 2019 Est. Earnings per Share (x)		12.8	13.9	25.5	10.5
Current Dividend Yield (%)		1.8	1.8	3.6	0.0
Market Value (\$mm)		252	255	470	95

(1) YTD profitability metrics calculated to exclude impact of divestiture; Return on Average Assets calculated using average assets for both subsidiary banks and Return on Average Tangible Common Equity calculated using average holding company tangible common equity.

(2) Nonperforming assets exclude restructured loans.

Sandler O'Neill used publicly available information to perform a similar analysis for MidWestOne and a group of financial institutions selected by Sandler O'Neill (the "MidWestOne Peer Group"). The MidWestOne Peer Group consisted of major exchange traded banks and thrifts headquartered in the Midwest region with total assets between \$2.0 billion and \$4.5 billion as of June 30, 2018, excluding Meta Financial Group, First Internet Bancorp, Sterling Bancorp, announced merger targets and mutual holding companies. The MidWestOne Peer Group consisted of the following companies.

Community Trust Bancorp, Inc.	Mercantile Bank Corporation
Equity Bancshares, Inc.	Merchants Bancorp
Farmers National Banc Corp.	Mutual First Financial
First Defiance Financial Corp.	Nicolet Bankshares, Inc.
First Financial Corporation	Old Second Bancorp, Inc.
First Mid-Illinois Bancshares, Inc.	Peoples Bancorp Inc.
German American Bancorp, Inc.	QCR Holdings, Inc.
Horizon Bancorp, Inc.	Stock Yards Bancorp, Inc.
Independent Bank Corporation	United Community Financial Corp.
	West Bancorporation, Inc.

The analysis compared financial data for MidWestOne as of or for the 12 months ended June 30, 2018 with the corresponding publicly available data for the MidWestOne Peer Group as of or for the 12 months ended June 30, 2018, with pricing data as of August 17, 2018. The table below sets forth the data for MidWestOne and the high, low, median and mean data for the MidWestOne Peer Group.

Table of Contents**MidWestOne Comparable Company Analysis**

	MidWestOne	MidWestOne Peer Group Median	MidWestOne Peer Group Mean	MidWestOne Peer Group High	MidWestOne Peer Group Low
Total Assets (\$mm)	3,276	3,289	3,222	4,205	2,011
Loans / Deposits (%)	90.8	91.5	90.6	104.1	57.7
Non-performing Assets / Total Assets (%) ⁽¹⁾	0.42	0.41	0.49	1.23	0.10
Tangible Common Equity / Tangible Assets (%)	8.5	9.2	9.3	13.1	7.1
Tier 1 Risk-based Capital Ratio (%)	10.9	12.3	12.8	18.1	10.2
Total Risk-based Capital Ratio (%)	12.0	13.1	13.6	19.0	11.2
YTD Return on Average Assets (%)	0.99	1.31	1.32	1.74	0.88
YTD Return on Average Tangible Common Equity (%)	12.8	15.2	14.7	17.7	11.2
YTD Net Interest Margin (%)	3.64	3.72	3.68	4.32	2.60
YTD Efficiency Ratio (%)	60.7	59.2	57.7	68.8	34.1
Price / Tangible Book Value (%)	151	214	214	280	165
Price / YTD Ann. Earnings per Share (x)	12.9	14.7	14.6	20.3	9.4
Price / 2018 Est. Earnings per Share (x)	12.5	14.5	14.8	17.7	12.6
Price / 2019 Est. Earnings per Share (x)	11.9	13.0	13.3	15.5	11.2
Current Dividend Yield (%)	2.3	1.9	1.8	3.3	0.0
Market Value (\$mm)	409	634	633	887	329

- (1) Nonperforming assets exclude restructured loans.

Analysis of Selected Merger Transactions

Sandler O'Neill reviewed a group of merger and acquisition transactions consisting of bank and thrift transactions where targets were headquartered in the Midwest region and announced between November 9, 2016 and August 17, 2018 with disclosed deal values and target total assets between \$500 million and \$2.0 billion, excluding the Stifel Financial / Business Bancshares, Triumph / First Bancorp of Durango, and Meta Financial / Crestmark deals (the "Regional Precedent Transactions"). Sandler O'Neill also reviewed a national group of merger and acquisition transactions consisting of bank and thrift transactions announced between January 1, 2018 and August 17, 2018 with disclosed deal values and target total assets between \$500 million and \$2.0 billion, excluding the Stifel Financial / Business Bancshares, Private Investor / Volunteer State Bancshares, and Meta Financial / Crestmark deals (the "Nationwide Precedent Transactions").

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The Regional Precedent Transactions group was composed of the following transactions: