

JPMORGAN CHASE &amp; CO

Form 424B2

April 26, 2019

**The information in this preliminary pricing supplement is not complete and may be changed. This preliminary pricing supplement is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.**

**Subject to completion dated April 26, 2019**

May , 2019 Registration Statement Nos. 333-222672 and 333-222672-01; Rule 424(b)(2)

JPMorgan Chase Financial Company LLC

Structured Investments

Notes Linked to the S&amp;P Economic Cycle Factor Rotator Index

Fully and Unconditionally Guaranteed by JPMorgan Chase &amp; Co.

This pricing supplement relates to three separate note offerings, each with its own terms:

- Notes Linked to the S&P Economic Cycle Factor Rotator Index due November 30, 2022 (the “3.5-Year Notes”)
  - Notes Linked to the S&P Economic Cycle Factor Rotator Index due May 31, 2024 (the “5-Year Notes”)
    - Notes Linked to the S&P Economic Cycle Factor Rotator Index due May 29, 2026 (the “7-Year Notes”)
      -

You may participate in one or more of the offerings.

The notes are designed for investors who seek exposure to any appreciation of the S&P Economic Cycle Factor Rotator Index over the term of the notes.

Investors should be willing to forgo interest and dividend payments, while seeking full repayment of principal at maturity.

The notes are unsecured and unsubordinated obligations of JPMorgan Chase Financial Company LLC, which we refer to as JPMorgan Financial, the payment on which is fully and unconditionally guaranteed by JPMorgan Chase & Co. **Any payment on the notes is subject to the credit risk of JPMorgan Financial, as issuer of the notes, and the credit risk of JPMorgan Chase & Co., as guarantor of the notes.**

Minimum denominations of \$1,000 and integral multiples thereof

- The notes are expected to price on or about May 28, 2019 and are expected to settle on or about May 31, 2019.

Note Offering	Participation Rate*	Observation Date**	Maturity Date**	Maximum Selling Commissions (Per \$1,000 Principal Amount Note)	Estimated Value of Notes If Priced Today (Per \$1,000 Principal Amount Note)	CUSIP
3.5-Year Notes	105% to 120%	November 25, 2022	November 30, 2022	\$50.00	\$948.50	48132CFD0
5-Year Notes	160% to 175%	May 28, 2024	May 31, 2024	\$50.00	\$928.20	48132CFE8
7-Year Notes	240% to 255%	May 26, 2026	May 29, 2026	\$50.00	\$900.50	48132CFG3

\* To be provided in the pricing supplement

\*\* Subject to postponement in the event of a market disruption event and as described under “General Terms of Notes — Postponement of a Determination Date — Notes Linked to a Single Underlying — Notes Linked to a Single Underlying (Other Than a Commodity Index)” and “General Terms of Notes — Postponement of a Payment Date” in the accompanying product supplement

**Investing in the notes involves a number of risks. See “Risk Factors” beginning on page PS-8 of the accompanying product supplement, “Risk Factors” beginning on page US-6 of the accompanying underlying supplement and “Selected Risk Considerations” beginning on page PS-9 of this pricing supplement.**

Neither the Securities and Exchange Commission (the “SEC”) nor any state securities commission has approved or disapproved of the notes or passed upon the accuracy or the adequacy of this pricing supplement or the accompanying product supplement, underlying supplement, prospectus supplement and prospectus. Any representation to the contrary is a criminal offense.

	Price to Public (1)	Fees and Commissions (2)	Proceeds to Issuer
3.5-Year Notes (per note / total)	\$1,000 / \$	\$ / \$	\$ / \$
5-Year Notes (per note / total)	\$1,000 / \$	\$ / \$	\$ / \$
7-Year Notes (per note / total)	\$1,000 / \$	\$ / \$	\$ / \$

(1) See “Supplemental Use of Proceeds” in this pricing supplement for information about the components of the price to public of the notes.

(2) J.P. Morgan Securities LLC, which we refer to as JPMS, acting as agent for JPMorgan Financial, will pay all of the selling commissions it receives from us to other affiliated or unaffiliated dealers. In no event will these selling commissions for each note offering exceed the applicable maximum amount listed in the first table above. See “Plan of Distribution (Conflicts of Interest)” in the accompanying product supplement.

**If the notes priced today, the estimated value of the notes for each note offering would be the applicable amount listed in the table above. The estimated value of the notes, when the terms of the notes are set, will be provided in the pricing supplement and will not be less than \$900.00 per \$1,000 principal amount note, \$900.00 per \$1,000 principal amount note and \$880.00 per \$1,000 principal amount note for the 3.5-Year Notes, 5-Year Notes and the 7-Year Notes, respectively. See “The Estimated Value of the Notes” in this pricing supplement for additional information.**

*The notes are not bank deposits, are not insured by the Federal Deposit Insurance Corporation or any other governmental agency and are not obligations of, or guaranteed by, a bank.*

Pricing supplement to product supplement no. 3-I dated April 5, 2018, underlying supplement no. 2-I dated April 5, 2018 and the prospectus and prospectus supplement, each dated April 5, 2018

General Key Terms

<p>Issuer: JPMorgan Chase Financial Company LLC, an indirect, wholly owned finance subsidiary of JPMorgan Chase &amp; Co.</p>	<p>Payment at Maturity:</p> <p>At maturity, you will receive a cash payment, for each \$1,000 principal amount note, of \$1,000 <i>plus</i> the Additional Amount, which may be zero.</p>
<p>Guarantor: JPMorgan Chase &amp; Co.</p>	<p><i>You are entitled to repayment of principal in full at maturity, subject to the credit risks of JPMorgan Financial and JPMorgan Chase &amp; Co.</i></p>
<p>Index: The S&amp;P Economic Cycle Factor Rotator Index (Bloomberg ticker: SPECFR6P). The Index’s component equity indices reflect the daily deduction of a notional financing cost.</p>	<p>Additional Amount: The Additional Amount payable at maturity per \$1,000 principal amount note will equal:</p>
<p>Participation Rate: As specified on the cover of this pricing supplement</p>	<p><math>\\$1,000 \times \text{Index Return} \times \text{Participation Rate}</math>,</p>
<p>Pricing Date: On or about May 28, 2019</p>	<p><i>provided</i> that the Additional Amount will not be less than zero.</p>
<p>Original Issue Date (Settlement Date): On or about May 31, 2019</p>	<p>Index Return:  <math display="block">\frac{(\text{Final Value} - \text{Initial Value})}{\text{Initial Value}}</math></p>
<p><b>Observation Date*</b>: As specified on the cover of this pricing supplement</p>	<p>Initial Value: The closing level of the Index on the Pricing Date</p>
<p><b>Maturity Date*</b>: As specified on the cover of this pricing supplement</p>	<p>Final Value: The closing level of the Index on the Observation Date</p>
<p>* Subject to postponement in the event of a market disruption event and as described under “General Terms of Notes — Postponement of a Determination Date — Notes Linked to a Single Underlying — Notes Linked to a Single Underlying (Other Than a Commodity Index)” and “General Terms of Notes — Postponement of a Payment Date” in the accompanying product supplement</p>	

## The S&P Economic Cycle Factor Rotator Index

The S&P Economic Cycle Factor Rotator Index (the “Index”) was developed by S&P Dow Jones Indices LLC and J.P. Morgan Securities LLC and is calculated, maintained and published by S&P Dow Jones Indices LLC. S&P Dow Jones has granted a license to JPMorgan Chase & Co. and certain of its affiliates or subsidiaries, including JPMorgan Financial, which was previously exclusive, and JPMorgan Chase & Co. intends to renew the exclusivity of its license. The Index was established on August 16, 2016.

The Index tracks the return of a notional dynamic portfolio consisting of (a) one of four excess price return U.S. equity indices (each, an “Underlying Equity Index”) as set forth below and (b) the S&P 5-Year U.S. Treasury Note Futures Excess Return Index (the “Underlying Treasury Index”), while seeking to maintain an annualized realized volatility approximately equal to 6.0% (the “Target Volatility”).

Each Underlying Equity Index seeks to provide exposure to the price change, less a notional financing cost deducted on a daily basis, of U.S. companies exhibiting one of the following sets of characteristics: momentum, value, high buybacks and free cash flows, or high dividends and low volatility. On a monthly basis, the Index selects one of the four Underlying Equity Indices based on the stage of the U.S. business cycle inferred from the recent trend and average level of the Chicago Fed National Activity Index (the “CFNAI”). The CFNAI is a weighted average of 85 monthly indicators of national economic activity. See “Background on the Chicago Fed National Activity Index” in this underlying supplement for additional information about the CFNAI. Each Underlying Equity Index is an “excess price” return index because it does not reflect reinvestment of dividends and other distributions and its performance is reduced by a notional financing cost.

The Underlying Treasury Index seeks to track the performance of a rolling position in the 5-Year U.S. Treasury Note futures contract. The Underlying Treasury Index is an “excess return” index and not a “total return” index because it does not reflect interest that could be earned on funds notionally committed to the trading of futures contracts. Negative roll returns associated with futures contracts may adversely affect the performance of the Underlying Treasury Index. For additional information, see “Background on the S&P 5-Year U.S. Treasury Note Futures Excess Return Index” below.

To achieve this, the Index selects from four sub-indices (each, a “Sub-Index”), each tracking the return of a notional dynamic portfolio consisting of one Underlying Equity Index and the Underlying Treasury Index, while seeking to maintain an annualized realized volatility approximately equal to the Target Volatility. The relevant Underlying Equity Index and the Underlying Treasury Index are each referred to as an “Underlying Index.” The Index allocates its entire exposure to one Sub-Index based on the stage of the U.S. business cycle inferred from the recent trend and average level of the CFNAI. For additional information, see “— Allocation to a Sub-Index Based on U.S. Business Cycle Stage” below.

Under normal market conditions, each Underlying Equity Index’s realized volatility has tended to be relatively more variable than the Underlying Treasury Index’s realized volatility. Consequently, and because the Index and each Sub-Index seek to maintain an annualized realized volatility approximately equal to the Target Volatility, the Index and each Sub-Index’s methodology may be more likely to shift exposure from the relevant Underlying Equity Index to the Underlying Treasury Index during periods of relatively higher market volatility and to shift exposure from the Underlying Treasury Index to the relevant Underlying Equity Index under normal market conditions exhibiting relatively lower market volatility.

In general, equity markets have historically been more likely to outperform fixed-income markets during periods of relatively lower market volatility and to underperform fixed-income markets during periods of relatively higher market volatility. However, there can be no assurance that the Index or any Sub-Index’s allocation strategy will achieve its intended results, or that the Index or any Sub-Index will outperform any alternative index or strategy that might reference the relevant Underlying Indices. Past performance should not be considered indicative of future performance.

In any initial selection between two eligible notional portfolios, each Sub-Index (and, therefore, the Index) will select the portfolio that has the higher allocation to the Underlying Index with a higher realized volatility, as described under “— Determining the Preliminary Portfolio of a Sub-Index for a Volatility Measure” below, which generally will cause the relevant Underlying Equity Index to receive a higher allocation than if the portfolio that has the higher allocation to the Underlying Index with a lower realized volatility were selected.

Furthermore, under normal market conditions, each Underlying Equity Index’s realized volatility has tended to be significantly higher than the Underlying Treasury Index’s realized volatility. Past performance should not be considered indicative of future performance. Under circumstances where an Underlying Equity Index’s realized volatility is significantly higher than that of the Underlying Treasury Index, the performance of the relevant Sub-Index (and, therefore, of the Index) is expected to be influenced to a greater extent by the performance of the relevant Underlying Equity Index than by the performance of the Underlying Treasury Index, unless the weight of the Underlying Treasury Index is significantly greater than the weight of the relevant Underlying Equity Index.

Consequently, even in cases where the allocation to the Underlying Treasury Index is greater than the allocation to the relevant Underlying Equity Index, the relevant Sub-Index (and, therefore, the Index) may be influenced to a greater extent by the performance of the relevant Underlying Equity Index than by the performance of the Underlying Treasury Index because, under some conditions, the

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

greater allocation to the Underlying Treasury Index will not be sufficiently large to offset the greater realized volatility of the relevant Underlying Equity Index.

The notional financing cost is intended to approximate the cost of maintaining a position in the relevant Underlying Equity Index using borrowed funds and is currently calculated as a composite rate of interest that is intended to track the overnight rate of return of a notional position in a 3-month time deposit in U.S. dollars, which is calculated by referencing the 2-month and 3-month USD LIBOR rates. LIBOR, which stands for “London Interbank Offered Rate,” is the average interest rate estimated by leading banks in London that they would be charged if borrowing from other banks without pledging any collateral or security.

On July 27, 2017, the Chief Executive of the U.K. Financial Conduct Authority (the “FCA”), which regulates LIBOR, announced that the FCA intends to stop persuading or compelling banks to submit rates for the calculation of LIBOR rates to the LIBOR administrator after 2021. It is impossible to predict the impact of this announcement on LIBOR rates, whether LIBOR rates will cease to be published or supported before or after 2021, the impact of any alternative reference rates or whether any additional reforms to LIBOR may be enacted in the United Kingdom or elsewhere. Uncertainty as to the nature of alternative reference rates and as to potential changes or other reforms to LIBOR may affect the 2-month and 3-month USD LIBOR rates used to determine the notional financing cost during the term of the notes, which may adversely affect the Index and therefore the return on and market value of the notes. See “Selected Risk Considerations — Risks Relating to Index — Uncertainty about the future of LIBOR may affect 2-month and 3-month USD LIBOR rates, which may adversely affect the Index and therefore the return on and the market value of the notes” below.

#### **Allocation to a Sub-Index Based on U.S. Business Cycle Stage**

On a monthly basis, the Index allocates its entire exposure to one of the four Sub-Indices based on the stage of the U.S. business cycle inferred from the recent trend and average level of the CFNAI. The CFNAI is constructed to have an average value of zero. Since economic activity tends toward a trend growth rate over time, a zero value for the CFNAI indicates that the U.S. economy is expanding at its historical trend rate of growth; negative values indicate below-average growth; and positive values indicate above-average growth. See “Background on the Chicago Fed National Activity Index” in this underlying supplement for additional information about the CFNAI.

For purposes of allocating its exposure, the Index attempts to determine the stage of the business cycle based on the recent trend and average level of the CFNAI each month in the following manner:

**Expansion:** the CFNAI 3-month average and the CFNAI 3-month change are both flat or positive, indicating that the U.S. economy is growing at an average or an above-average growth rate and that the growth rate is flat or accelerating;

**Recovery:** the CFNAI 3-month average is negative, and the CFNAI 3-month change is flat or positive, indicating that the U.S. economy is growing at a below-average growth rate (or is shrinking) and that the growth rate is flat or accelerating (or that the rate of shrinking is flat or slowing);

**Slowdown:** the CFNAI 3-month average is flat or positive, and the CFNAI 3-month change is negative, indicating that the U.S. economy is growing at an average or an above-average growth rate and that the growth rate is slowing; and

**Contraction:** the CFNAI 3-month average and the CFNAI 3-month change are both negative, indicating that the U.S. economy is growing at a below-average growth rate (or is shrinking) and that the growth rate is slowing (or that the rate of shrinking is accelerating).

If the business cycle is determined to be in Contraction immediately following a month in which it was determined to be in Recovery, the Index will determine it to be in Recovery unless and until a second consecutive month in which the CFNAI 3-month average and the CFNAI 3-month change are both negative.

The following table sets forth the Sub-Index associated with each stage of the business cycle for purposes of the Index, and the Underlying Equity Index underlying each Sub-Index.

<b>Business Cycle Sub-Index</b>		<b>Underlying Equity Index</b>
<b>Stage</b>	<b>(Bloomberg Ticker)</b>	
Expansion	S&P Momentum Daily Risk Control 6% Excess Return Index (SPECFM6P) (the “Momentum Sub-Index”)	S&P Momentum United States LargeMidCap (USD) Excess Return Index
Recovery	S&P Value Daily Risk Control 6% Excess Return Index (SPECFV6P) (the “Value Sub-Index”)	S&P 500® Pure Value Excess Return Index

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

**Business Cycle Sub-Index**

<b>Stage</b>	<b>(Bloomberg Ticker)</b>	<b>Underlying Equity Index</b>
Slowdown	S&P Buyback Daily Risk Control 6% Excess Return Index (SPECFB6P) (the “Buyback Sub-Index”)	S&P 500 <sup>®</sup> Buyback FCF Excess Return Index
Contraction	S&P Low Volatility High Dividend Daily Risk Control 6% Excess Return Index (SPECFL6P) (the “High Dividend Low Volatility Sub-Index”)	S&P 500 <sup>®</sup> Low Volatility High Dividend Excess Return Index

The S&P Momentum United States LargeMidCap (USD) Excess Return Index, the Underlying Equity Index of the Momentum Sub-Index, is designed to measure the performance of U.S. large- and mid-capitalization companies with relatively higher recent performance compared to the S&P United States LargeMidCap Index. The Index allocates to the Momentum Sub-Index when it determines the business cycle to be in Expansion in an attempt to provide exposure to companies that are moving with a strong and strengthening U.S. economy. See “Background on the S&P Momentum United States LargeMidCap Index” in the accompanying underlying supplement.

The S&P 500<sup>®</sup> Pure Value Excess Return Index, the Underlying Equity Index of the Value Sub-Index, is designed to measure the performance of stocks in the S&P 500<sup>®</sup> Index that exhibit relatively strong value characteristics (by reference to (1) book value to price ratio, (2) earnings to price ratio and (3) sales to price ratio) and relatively weak growth characteristics (by reference to EPS growth, sales per share growth and price momentum). The Index allocates to Value Sub-Index when it determines the business cycle to be in Recovery in an attempt to provide exposure to companies that may be undervalued. See “Background on the S&P 500<sup>®</sup> Pure Value Index” in the accompanying underlying supplement.

The S&P 500<sup>®</sup> Buyback FCF Excess Return Index, the Underlying Equity Index of the Buyback Sub-Index, is designed to measure the performance of 30 companies (excluding JPMorgan Chase & Co., Visa and their past or present affiliated companies) with relatively higher rates of buying back their own stock, relatively higher levels of trading activity in their stock, and relatively higher free cash flow yields, as compared to the S&P 500<sup>®</sup> Index. The Index allocates to Buyback Sub-Index when it determines the business cycle to be in Slowdown in an attempt to provide exposure to companies that are supporting their stocks through buybacks and have sufficient free cash flow to maintain this program. See “Background on the S&P 500<sup>®</sup> Buyback FCF Index” in the accompanying underlying supplement.

The S&P 500<sup>®</sup> Low Volatility High Dividend Excess Return Index, the Underlying Equity Index of the High Dividend Low Volatility Sub-Index, is designed to measure the performance of the 50 least-volatile among the 75 highest dividend-yielding companies in the S&P 500<sup>®</sup> Index, subject to sector and individual constituent concentration limits. The Index allocates to the High Dividend Low Volatility Sub-Index when it determines the business cycle to be in Contraction in an attempt to provide exposure to defensive companies that pay relatively higher dividends and have relatively lower volatility. Although the S&P 500<sup>®</sup> Low Volatility High Dividend Excess Return Index measures the performance of high dividend-yielding companies, the S&P 500<sup>®</sup> Low Volatility High Dividend Excess Return Index will not include any dividends paid on the securities that make up the S&P 500<sup>®</sup> Low Volatility High Dividend Excess Return Index. See “Background on the S&P 500<sup>®</sup> Low Volatility High Dividend Index” in the accompanying underlying supplement.

The S&P 5-Year U.S. Treasury Note Futures Excess Return Index seeks to track the performance of a rolling position in the 5-Year U.S. Treasury Note futures contract. See “Background on the S&P 5-Year U.S. Treasury Note Futures Excess Return Index” in the accompanying underlying supplement.

The Index is rebalanced monthly after the market close on the first business day of each month. Index allocation changes are typically announced three business days prior to the rebalancing date. The selected Sub-Index is not



expected to change between rebalancings. If a Sub-Index is discontinued, the index committee may elect to discontinue representation of the affected strategy within the Index or designate a successor Sub-Index.

The Index is reported by the Bloomberg Professional<sup>®</sup> service (“Bloomberg”) under the ticker symbol “SPECFR6P.”

**See “The S&P Economic Cycle Factor Rotator Index” in the accompanying underlying supplement, as supplemented by the following, for more information about the Index.**

The section entitled “The S&P Economic Cycle Factor Rotator Index — Calculation of the CFNAI 3-Month Average and the CFNAI 3-Month Change” in the accompanying underlying supplement is deemed to be deleted in its entirety and replaced by the following:

**“Calculation of the CFNAI 3-Month Average and the CFNAI 3-Month Change**

Each month, the Index (i) calculates the average of the three most recent monthly CFNAI values from the Federal Reserve Bank of Chicago (the “CFNAI 3-month average”) and (ii) subtracts the fourth most recent monthly CFNAI value from the most recent monthly CFNAI value (the “CFNAI 3-month change”). If restated CFNAI values are available for previous months, they will be used in

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

the calculation of the CFNAI 3-month change. However, S&P Dow Jones will not revise previously calculated CFNAI 3-month changes from previous Index rebalancings. Prior to March 1, 2012 and since February 1, 2017, the Index uses CFNAI values and CFNAI 3-month averages that have first been rounded to the nearest 0.01. Because the CFNAI values are rounded before the CFNAI 3-month average is calculated, the CFNAI 3-month average used for purposes of the Index may be different from the CFNAI 3-month average that is published by the Federal Reserve Bank of Chicago.”

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

## Hypothetical Payout Profile for the 3.5-Year Notes

The following table and graph illustrate the hypothetical payment at maturity on the notes linked to a hypothetical Index. The hypothetical payments set forth below assume the following:

- an Initial Value of 100.00; and
- a Participation Rate of 105.00%.

The hypothetical Initial Value of 100.00 has been chosen for illustrative purposes only and may not represent a likely actual Initial Value. The actual Initial Value will be the closing level of the Index on the Pricing Date and will be provided in the pricing supplement. For historical data regarding the actual closing levels of the Index, please see the historical information set forth under “Hypothetical Back-Tested Data and Historical Information” in this pricing supplement.

Each hypothetical total return or hypothetical payment at maturity set forth below is for illustrative purposes only and may not be the actual total return or payment at maturity applicable to a purchaser of the 3.5-Year Notes. The numbers appearing in the following table and graph have been rounded for ease of analysis.

Final Value	Index Return	Additional Amount	Payment at Maturity
165.00	65.00%	\$682.50	\$1,682.50
150.00	50.00%	\$525.00	\$1,525.00
140.00	40.00%	\$420.00	\$1,420.00
130.00	30.00%	\$315.00	\$1,315.00
120.00	20.00%	\$210.00	\$1,210.00
110.00	10.00%	\$105.00	\$1,105.00
105.00	5.00%	\$52.50	\$1,052.50
101.00	1.00%	\$10.50	\$1,010.50
100.00	0.00%	\$0.00	\$1,000.00
95.00	-5.00%	\$0.00	\$1,000.00
90.00	-10.00%	\$0.00	\$1,000.00
80.00	-20.00%	\$0.00	\$1,000.00
70.00	-30.00%	\$0.00	\$1,000.00
60.00	-40.00%	\$0.00	\$1,000.00
50.00	-50.00%	\$0.00	\$1,000.00
40.00	-60.00%	\$0.00	\$1,000.00
30.00	-70.00%	\$0.00	\$1,000.00
20.00	-80.00%	\$0.00	\$1,000.00

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## Notes Linked to the S&amp;P Economic Cycle Factor Rotator Index

The following graph demonstrates the hypothetical payments at maturity on the notes at maturity for a sub-set of Index Returns detailed in the table above (-50% to 50%). We cannot give you assurance that the performance of the Index will result in a payment at maturity in excess of \$1,000.00 per \$1,000 principal amount note.

#### Hypothetical Payout Profile for the 5-Year Notes

The following table and graph illustrate the hypothetical payment at maturity on the notes linked to a hypothetical Index. The hypothetical payments set forth below assume the following:

- an Initial Value of 100.00; and
- a Participation Rate of 160.00%.

The hypothetical Initial Value of 100.00 has been chosen for illustrative purposes only and may not represent a likely actual Initial Value. The actual Initial Value will be the closing level of the Index on the Pricing Date and will be provided in the pricing supplement. For historical data regarding the actual closing levels of the Index, please see the historical information set forth under “Hypothetical Back-Tested Data and Historical Information” in this pricing supplement.

Each hypothetical total return or hypothetical payment at maturity set forth below is for illustrative purposes only and may not be the actual total return or payment at maturity applicable to a purchaser of the 5-Year Notes. The numbers appearing in the following table and graph have been rounded for ease of analysis.

Final Value	Index Return	Additional Amount	Payment at Maturity
165.00	65.00%	\$1,040.00	\$2,040.00
150.00	50.00%	\$800.00	\$1,800.00
140.00	40.00%	\$640.00	\$1,640.00
130.00	30.00%	\$480.00	\$1,480.00
120.00	20.00%	\$320.00	\$1,320.00
110.00	10.00%	\$160.00	\$1,160.00
105.00	5.00%	\$80.00	\$1,080.00
101.00	1.00%	\$16.00	\$1,016.00
100.00	0.00%	\$0.00	\$1,000.00
95.00	-5.00%	\$0.00	\$1,000.00
90.00	-10.00%	\$0.00	\$1,000.00
80.00	-20.00%	\$0.00	\$1,000.00
70.00	-30.00%	\$0.00	\$1,000.00
60.00	-40.00%	\$0.00	\$1,000.00
50.00	-50.00%	\$0.00	\$1,000.00

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

40.00-60.00% \$0.00 \$1,000.00  
 30.00-70.00% \$0.00 \$1,000.00  
 20.00-80.00% \$0.00 \$1,000.00

The following graph demonstrates the hypothetical payments at maturity on the notes at maturity for a sub-set of Index Returns detailed in the table above (-50% to 50%). We cannot give you assurance that the performance of the Index will result in a payment at maturity in excess of \$1,000.00 per \$1,000 principal amount note.

#### Hypothetical Payout Profile for the 7-Year Notes

The following table and graph illustrate the hypothetical payment at maturity on the notes linked to a hypothetical Index. The hypothetical payments set forth below assume the following:

· an Initial Value of 100.00; and  
 · a Participation Rate of 240.00%.

The hypothetical Initial Value of 100.00 has been chosen for illustrative purposes only and may not represent a likely actual Initial Value. The actual Initial Value will be the closing level of the Index on the Pricing Date and will be provided in the pricing supplement. For historical data regarding the actual closing levels of the Index, please see the historical information set forth under “Hypothetical Back-Tested Data and Historical Information” in this pricing supplement.

Each hypothetical total return or hypothetical payment at maturity set forth below is for illustrative purposes only and may not be the actual total return or payment at maturity applicable to a purchaser of the 7-Year Notes. The numbers appearing in the following table and graph have been rounded for ease of analysis.

Final Value	Index Return	Additional Amount	Payment at Maturity
165.00	65.00%	\$1,560.00	\$2,560.00
150.00	50.00%	\$1,200.00	\$2,200.00
140.00	40.00%	\$960.00	\$1,960.00
130.00	30.00%	\$720.00	\$1,720.00
120.00	20.00%	\$480.00	\$1,480.00
110.00	10.00%	\$240.00	\$1,240.00
105.00	5.00%	\$120.00	\$1,120.00
101.00	1.00%	\$24.00	\$1,024.00
100.00	0.00%	\$0.00	\$1,000.00
95.00	-5.00%	\$0.00	\$1,000.00

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

90.00-10.00% \$0.00 \$1,000.00  
80.00-20.00% \$0.00 \$1,000.00  
70.00-30.00% \$0.00 \$1,000.00  
60.00-40.00% \$0.00 \$1,000.00  
50.00-50.00% \$0.00 \$1,000.00  
40.00-60.00% \$0.00 \$1,000.00  
30.00-70.00% \$0.00 \$1,000.00  
20.00-80.00% \$0.00 \$1,000.00

The following graph demonstrates the hypothetical payments at maturity on the notes at maturity for a sub-set of Index Returns detailed in the table above (-50% to 50%). We cannot give you assurance that the performance of the Index will result in a payment at maturity in excess of \$1,000.00 per \$1,000 principal amount note.

#### How the Notes Work

##### Upside Scenario:

If the Final Value is greater than the Initial Value, investors will receive at maturity the \$1,000 principal amount *plus* the Additional Amount, which is equal to \$1,000 *times* the Index Return *times* the Participation Rate for each \$1,000 principal amount note.

For the 3.5-Year Notes, assuming a hypothetical Participation Rate of 105.00%, if the closing level of the Index increases 10.00%, investors will receive at maturity a 10.50% return, or \$1,105.00 per \$1,000 principal amount note.  
For the 5-Year Notes, assuming a hypothetical Participation Rate of 160.00%, if the closing level of the Index increases 10.00%, investors will receive at maturity a 16.00% return, or \$1,160.00 per \$1,000 principal amount note.  
For the 7-Year Notes, assuming a hypothetical Participation Rate of 240.00%, if the closing level of the Index increases 10.00%, investors will receive at maturity a 24.00% return, or \$1,240.00 per \$1,000 principal amount note.

##### Par Scenario:

If the Final Value is equal to the Initial Value or is less than the Initial Value, the Additional Amount will be zero and investors will receive at maturity the principal amount of their notes.

The hypothetical returns and hypothetical payments on the notes shown above apply only if you hold the notes for their entire term. These hypotheticals do not reflect the fees or expenses that would be associated with any sale in the secondary market. If these fees and expenses were included, the hypothetical returns and hypothetical payments shown above would likely be lower.

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

## Selected Risk Considerations

An investment in the notes involves significant risks. These risks are explained in more detail in the “Risk Factors” sections of the accompanying product supplement and underlying supplement.

### Risks Relating to the Notes Generally

#### **THE NOTES MAY NOT PAY MORE THAN THE PRINCIPAL AMOUNT AT MATURITY —**

If the Final Value is less than or equal to the Initial Value, you will receive only the principal amount of your notes at maturity, and you will not be compensated for any loss in value due to inflation and other factors relating to the value of money over time.

#### **THE UNDERLYING EQUITY INDICES WILL INCLUDE THE DEDUCTION OF A NOTIONAL FINANCING COST CALCULATED BASED ON THE RELEVANT LIBOR RATES —**

This notional financing cost will be deducted daily. As a result of the deduction of the notional financing cost, the level of the Index will trail the value of a hypothetical identically constituted synthetic portfolio from which no such cost is deducted.

#### **CREDIT RISKS OF JPMORGAN FINANCIAL AND JPMORGAN CHASE & CO. —**

Investors are dependent on our and JPMorgan Chase & Co.’s ability to pay all amounts due on the notes. Any actual or potential change in our or JPMorgan Chase & Co.’s creditworthiness or credit spreads, as determined by the market for taking that credit risk, is likely to adversely affect the value of the notes. If we and JPMorgan Chase & Co. were to default on our payment obligations, you may not receive any amounts owed to you under the notes and you could lose your entire investment.

#### **AS A FINANCE SUBSIDIARY, JPMORGAN FINANCIAL HAS NO INDEPENDENT OPERATIONS AND HAS LIMITED ASSETS —**

As a finance subsidiary of JPMorgan Chase & Co., we have no independent operations beyond the issuance and administration of our securities. Aside from the initial capital contribution from JPMorgan Chase & Co., substantially all of our assets relate to obligations of our affiliates to make payments under loans made by us or other intercompany agreements. As a result, we are dependent upon payments from our affiliates to meet our obligations under the notes. If these affiliates do not make payments to us and we fail to make payments on the notes, you may have to seek payment under the related guarantee by JPMorgan Chase & Co., and that guarantee will rank *pari passu* with all other unsecured and unsubordinated obligations of JPMorgan Chase & Co.

#### **POTENTIAL CONFLICTS —**

We and our affiliates play a variety of roles in connection with the notes. In performing these duties, our and JPMorgan Chase & Co.’s economic interests are potentially adverse to your interests as an investor in the notes. It is possible that hedging or trading activities of ours or our affiliates in connection with the notes could result in substantial returns for us or our affiliates while the value of the notes declines. Please refer to “Risk Factors — Risks Relating to Conflicts of Interest” in the accompanying product supplement.

One of our affiliates, JPMS, worked with S&P Dow Jones Indices LLC in developing the guidelines and policies governing the composition and calculation of the Index. Although judgments, policies and determinations concerning the Index were made by JPMS, JPMorgan Chase & Co., as the parent company of JPMS, ultimately controls JPMS. The policies and judgments for which JPMS was responsible could have an impact, positive or negative, on the level of the Index and the value of your notes. JPMS is under no obligation to consider your interests as an investor in the notes in its role in developing the guidelines and policies governing the Index or making judgments that may affect the

level of the Index.

ICE Benchmark Administration calculates USD LIBOR using submissions from contributing banks, including one of our affiliates. We and our affiliates will have no obligation to consider your interests as a holder of the notes in taking any actions in connection with acting as a USD LIBOR contributing bank that might affect the 2-month and 3-month USD LIBOR or the notes.

Furthermore, one of our affiliates, JPMS, is one of the primary dealers through which the Federal Reserve conducts open-market purchases and sales of U.S. Treasury and federal agency securities, including U.S. Treasury notes. These activities may affect the prices and yields on the U.S. Treasury notes, which may in turn affect the level of the Underlying Treasury Index and the level of the Index. JPMS has no obligation to take into consideration your interests as a holder of the notes when undertaking these activities.

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Notes Linked to the S&P Economic Cycle Factor Rotator Index



JPMORGAN CHASE & CO. IS CURRENTLY ONE OF THE COMPANIES THAT MAKE UP THE S&P 500<sup>®</sup> INDEX AND THE S&P 500<sup>®</sup> PURE VALUE EXCESS RETURN INDEX AND MAY BE INCLUDED IN THE S&P MOMENTUM UNITED STATES LARGEMIDCAP (USD) EXCESS RETURN INDEX OR THE S&P 500<sup>®</sup> LOW VOLATILITY HIGH DIVIDEND EXCESS RETURN INDEX,

but JPMorgan Chase & Co. will not have any obligation to consider your interests in taking any corporate action that might affect the levels of the S&P 500<sup>®</sup> Index, the S&P Momentum United States LargeMidCap (USD) Excess Return Index, the S&P 500<sup>®</sup> Pure Value Excess Return Index or the S&P 500<sup>®</sup> Low Volatility High Dividend Excess Return Index.

**· THE NOTES DO NOT PAY INTEREST.**

**· YOU WILL NOT RECEIVE DIVIDENDS OR OTHER DISTRIBUTIONS ON THE SECURITIES UNDERLYING THE INDEX OR HAVE ANY RIGHTS WITH RESPECT TO THOSE SECURITIES OR THE FUTURES CONTRACTS UNDERLYING THE INDEX.**

JPMS AND ITS AFFILIATES MAY HAVE PUBLISHED RESEARCH, EXPRESSED OPINIONS OR PROVIDED RECOMMENDATIONS THAT ARE INCONSISTENT WITH INVESTING IN OR HOLDING THE NOTES, AND MAY DO SO IN THE FUTURE —

Any research, opinions or recommendations could affect the market value of the notes. Investors should undertake their own independent investigation of the merits of investing in the notes, the Index and the securities and futures contracts composing the Index.

**LACK OF LIQUIDITY —**

The notes will not be listed on any securities exchange. Accordingly, the price at which you may be able to trade your notes is likely to depend on the price, if any, at which JPMS is willing to buy the notes. You may not be able to sell your notes. The notes are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your notes to maturity.

**· THE FINAL TERMS AND VALUATION OF THE NOTES WILL BE PROVIDED IN THE PRICING SUPPLEMENT —**

You should consider your potential investment in the notes based on the minimums for the estimated value of the notes and the Participation Rate.

**· THE ESTIMATED VALUE OF THE NOTES WILL BE LOWER THAN THE ORIGINAL ISSUE PRICE (PRICE TO PUBLIC) OF THE NOTES —**

The estimated value of the notes is only an estimate determined by reference to several factors. The original issue price of the notes will exceed the estimated value of the notes because costs associated with selling, structuring and hedging the notes are included in the original issue price of the notes. These costs include the selling commissions, the projected profits, if any, that our affiliates expect to realize for assuming risks inherent in hedging our obligations under the notes and the estimated cost of hedging our obligations under the notes. See “The Estimated Value of the Notes” in this pricing supplement.

**· THE ESTIMATED VALUE OF THE NOTES DOES NOT REPRESENT FUTURE VALUES OF THE NOTES AND MAY DIFFER FROM OTHERS’ ESTIMATES —**

See “The Estimated Value of the Notes” in this pricing supplement.

**· THE ESTIMATED VALUE OF THE NOTES IS DERIVED BY REFERENCE TO AN INTERNAL FUNDING RATE —**

The internal funding rate used in the determination of the estimated value of the notes may differ from the market-implied funding rate for vanilla fixed rate debt instruments of a similar maturity issued by JPMorgan Chase & Co. or its affiliates. Any difference may be based on, among other things, our and our affiliates’ view of the funding value of the notes as well as the higher issuance, operational and ongoing liability management costs of the notes in

comparison to those costs for the conventional fixed income instruments of JPMorgan Chase & Co. This internal funding rate is based on certain market inputs and assumptions, which may prove to be incorrect, and is intended to approximate the prevailing market replacement funding rate for the notes. The use of an internal funding rate and any potential changes to that rate may have an adverse effect on the terms of the notes and any secondary market prices of the notes. See “The Estimated Value of the Notes” in this pricing supplement.

**THE VALUE OF THE NOTES AS PUBLISHED BY JPMS (AND WHICH MAY BE REFLECTED ON CUSTOMER ACCOUNT STATEMENTS) MAY BE HIGHER THAN THE THEN-CURRENT ESTIMATED VALUE OF THE NOTES FOR A LIMITED TIME PERIOD —**

We generally expect that some of the costs included in the original issue price of the notes will be partially paid back to you in connection with any repurchases of your notes by JPMS in an amount that will decline to zero over an initial predetermined period.

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

See “Secondary Market Prices of the Notes” in this pricing supplement for additional information relating to this initial period. Accordingly, the estimated value of your notes during this initial period may be lower than the value of the notes as published by JPMS (and which may be shown on your customer account statements).

**SECONDARY MARKET PRICES OF THE NOTES WILL LIKELY BE LOWER THAN THE ORIGINAL ISSUE PRICE OF THE NOTES —**

Any secondary market prices of the notes will likely be lower than the original issue price of the notes because, among other things, secondary market prices take into account our internal secondary market funding rates for structured debt issuances and, also, because secondary market prices may exclude selling commissions, projected hedging profits, if any, and estimated hedging costs that are included in the original issue price of the notes. As a result, the price, if any, at which JPMS will be willing to buy the notes from you in secondary market transactions, if at all, is likely to be lower than the original issue price. Any sale by you prior to the Maturity Date could result in a substantial loss to you.

**SECONDARY MARKET PRICES OF THE NOTES WILL BE IMPACTED BY MANY ECONOMIC AND MARKET FACTORS —**

The secondary market price of the notes during their term will be impacted by a number of economic and market factors, which may either offset or magnify each other, aside from the selling commissions, projected hedging profits, if any, estimated hedging costs and the level of the Index. Additionally, independent pricing vendors and/or third party broker-dealers may publish a price for the notes, which may also be reflected on customer account statements. This price may be different (higher or lower) than the price of the notes, if any, at which JPMS may be willing to purchase your notes in the secondary market. See “Risk Factors — Risks Relating to the Estimated Value and Secondary Market Prices of the Notes — Secondary market prices of the notes will be impacted by many economic and market factors” in the accompanying product supplement.

**Risks Relating to the Index**

**THE INDEX AND THE SUB-INDICES MAY NOT BE SUCCESSFUL OR OUTPERFORM ANY ALTERNATIVE STRATEGIES THAT MIGHT BE EMPLOYED IN RESPECT OF THE CFNAI AND THE UNDERLYING INDICES —**

On a monthly basis, the Index allocates its entire exposure to one of four Sub-Indices, and thereby allocates its equity exposure to one of four Underlying Equity Indices, each providing exposure to U.S. companies with specified characteristics, based on the stage of the U.S. business cycle inferred from the recent trend and average level of the CFNAI. No assurance can be given that the inferred stage of the U.S. business cycle will be reflective of the actual current stage of the U.S. business cycle. Because the CFNAI is a backward-looking measure that reflects data from the preceding month, and because the Index references the 3-month average of the CFNAI, such inferred U.S. business cycle for purposes of the Index may lag behind the actual U.S. business cycle. In addition, no assurance can be given that the strategy the Index employs with respect to any U.S. business cycle stage is appropriate for that business cycle stage or will outperform any of the other strategies or any alternative investment strategy.

Each Sub-Index (and, therefore, the Index) tracks the return of a notional dynamic portfolio consisting of (a) an Underlying Equity Index and (b) the Underlying Treasury Index, while seeking to maintain an annualized realized volatility approximately equal to the Target Volatility of 6.0%). Each Sub Index (and, therefore, the Index) seeks to maintain an annualized realized volatility approximately equal to the Target Volatility by rebalancing its exposures to the relevant Underlying Indices on each day based on two measures of realized portfolio volatility: a shorter-term volatility measure and a longer-term volatility measure. Each volatility measure reflects an exponentially weighted moving average, meaning that greater weight is assigned to more recent performance and less weight is assigned to less recent performance. By seeking to maintain an annualized realized volatility approximately equal to the Target Volatility, the Index and each Sub-Index may underperform an alternative strategy that seeks to maintain a higher annualized realized volatility or an alternative strategy that does not seek to maintain a level volatility.

In addition, on each day, each Sub-Index (and, therefore, the Index) generally selects the notional portfolio identified for the volatility measure that has the lower allocation to the relevant Underlying Equity Index as the notional portfolio to be tracked by that Sub-Index (and, therefore, the Index). Each Sub-Index's (and, therefore, the Index's) selection of the notional portfolio with the lower allocation to the relevant Underlying Equity Index may be more likely to result in that Sub-Index (and, therefore, the Index) tracking a notional portfolio with a lower realized volatility than if that Sub-Index (and, therefore, the Index) were to select the notional portfolio with the higher allocation to the relevant Underlying Equity Index.

No assurance can be given that the investment strategies on which the Index and each Sub-Index are based will be successful or that the Index and the Sub-Indices will outperform any alternative strategies that might be employed in respect of the CFNAI and the Underlying Indices.

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

THE INDEX AND ANY Sub-Index may not approximate THE target volatility — No assurance can be given that the Index or any Sub-Index will maintain an annualized realized volatility that approximates the Target Volatility. The actual realized volatility of the Index and of each Sub-Index may be greater or less than the Target Volatility. Each Sub-Index seeks to maintain an annualized realized volatility approximately equal to the Target Volatility of 6.0% by rebalancing its exposures to the relevant Underlying Indices on each day based on two measures of realized portfolio volatility. However, there is no guarantee that trends exhibited by either measure of realized portfolio volatility will continue in the future. The volatility of a notional portfolio on any day may change quickly and unexpectedly. Accordingly, the actual realized annualized volatility of the Index and of each Sub-Index on a daily basis may be greater than or less than the Target Volatility, which may adversely affect the level of the Index and the value of the notes.

Each Sub-Index (and, therefore, the Index) may be significantly uninvested — For each volatility measure on each day, each Sub-Index (and, therefore, the Index) seeks to identify a notional portfolio composed of the relevant Underlying Indices that has an annualized realized volatility determined for that volatility measure approximately equal to the Target Volatility of 6.0% and an aggregate weight of 100%. If a Sub-Index (and, therefore, the Index) identifies and selects such a notional portfolio for a volatility measure, but the weight of either relevant Underlying Index is greater than 100%, the weight of that Underlying Index in the notional portfolio selected for that volatility measure on that day will be 100% and, if the weight of either relevant Underlying Index is less than 0%, the weight of that Underlying Index in the notional portfolio selected for that volatility measure on that day will be 0%. In addition, if there is no such notional portfolio for a volatility measure, the relevant Sub-Index (and, therefore, the Index) selects for that volatility measure on that day the notional portfolio with the lowest realized volatility.

As a result of applying a cap and floor and in the case of selecting the notional portfolio with the lowest realized volatility, the resulting notional portfolio may be greater than or less than 6.0% for the relevant volatility measure for the relevant Sub-Index (and, therefore, the Index). If the annualized realized volatility of the notional portfolio selected for a volatility measure on any day is greater than 6.0%, that notional portfolio for the relevant Sub-Index (and, therefore, the Index) will be adjusted so that the weight of each relevant Underlying Index in that notional portfolio will be reduced proportionately to achieve a notional portfolio that has an annualized realized volatility for the relevant volatility measure of 6.0%. Under these circumstances, the aggregate weight of the Underlying Indices in that notional portfolio for the relevant Sub-Index (and, therefore, the Index) will be less than 100%.

If a Sub-Index tracks a notional portfolio with an aggregate weight that is less than 100% and if the Index has allocated its exposure to that Sub-Index, the Index will not be fully invested, and any uninvested portion will earn no return. The Index may be significantly uninvested on any given day, and will realize only a portion of any gains due to appreciation of the Underlying Indices on any such day.

Each Sub-Index (AND, THEREFORE, THE INDEX) may be more heavily influenced by the performance of the relevant Underlying Equity Index than the performance of the Underlying Treasury Index in general over time — In any initial selection between two eligible notional portfolios, each Sub-Index (and, therefore, the Index) will select the portfolio that has the higher allocation to the Underlying Index with a higher realized volatility as described above, which generally will cause the relevant Underlying Equity Index to receive a higher allocation than if the portfolio that has the higher allocation to the Underlying Index with a lower realized volatility were selected.

Furthermore, under normal market conditions, each Underlying Equity Index's realized volatility has tended to be significantly higher than the Underlying Treasury Index's realized volatility. Past performance should not be considered indicative of future performance. Under circumstances where an Underlying Equity Index's realized volatility is significantly higher than that of the Underlying Treasury Index, the performance of the relevant Sub-Index (and, therefore, the Index) is expected to be influenced to a greater extent by the performance of the relevant Underlying Equity Index than by the performance of the Underlying Treasury Index, unless the weight of the

Underlying Treasury Index is significantly greater than the weight of the relevant Underlying Equity Index.

Consequently, even in cases where the allocation to the Underlying Treasury Index is greater than the allocation to the relevant Underlying Equity Index, the relevant Sub-Index may be influenced to a greater extent by the performance of the relevant Underlying Equity Index than by the performance of the Underlying Treasury Index because, under some conditions, the greater allocation to the Underlying Treasury Index will not be sufficiently large to offset the greater realized volatility of the relevant Underlying Equity Index.

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

Accordingly, the level of the Index and of a Sub-Index may decline if the value of the relevant Underlying Equity Index declines, even if the level of the Underlying Treasury Index increases at the same time. See also “— Changes in the values of the relevant Underlying Indices may offset each other or may become correlated in decline” below.

A significant portion of each Sub-Index’s exposure may be allocated to the Underlying Treasury Index — Under normal market conditions, each Underlying Equity Index has tended to exhibit a realized volatility that is higher than the Target Volatility and that is higher than the realized volatility of the Underlying Treasury Index in general over time. As a result, each Sub-Index will generally need to reduce its exposure to the relevant Underlying Equity Index in order to approximate the Target Volatility. Therefore, each Sub-Index (and, therefore, the Index) may have significant exposure for an extended period of time to the Underlying Treasury Index, and that exposure may be greater, perhaps significantly greater, than its exposure to the relevant Underlying Equity Index. Moreover, under certain circumstances, a Sub-Index may have no exposure to the relevant Underlying Equity Index. However, the returns of the Underlying Treasury Index may be significantly lower than the returns of the relevant Underlying Equity Index, and possibly even negative while the returns of the relevant Underlying Equity Index are positive, which will adversely affect the levels of the Sub-Index and the Index and any payment on, and the value of, the notes.

**CHANGES in the VALUE OF THE RELEVANT UNDERLYING INDICES MAY OFFSET EACH OTHER OR MAY BECOME CORRELATED IN DECLINE —**

At a time when the value of one Underlying Index referenced by a Sub-Index increases, the value of the other Underlying Index referenced by that Sub-Index may not increase as much or may even decline. This may offset the potentially positive effect of the performance of the former Underlying Index on the performance of that Sub-Index. During the term of the notes, it is possible that the value of a Sub-Index may decline even if the value of one of its Underlying Indices rises, because of the offsetting effect of a decline in its other Underlying Index. It is also possible that the returns of the Underlying Indices for a Sub-Index may be positively correlated with each other. In this case, a decline in one Underlying Index would be accompanied by a decline in the other Underlying Index, which may adversely affect the performance of that Sub-Index. As a result, that Sub-Index (and, therefore, the Index) may not perform as well as an alternative index that tracks only one Underlying Index or the other.

**THE INVESTMENT STRATEGY USED TO CONSTRUCT THE INDEX INVOLVES DAILY ADJUSTMENTS TO EACH SUB-INDEX’S NOTIONAL EXPOSURE TO ITS UNDERLYING INDICES —**

Each Sub-Index is subject to daily adjustments to its notional exposure to its Underlying Indices. By contrast, a notional portfolio that is not subject to daily exposure adjustments in this manner could see greater compounded gains over time through exposure to a consistently and rapidly appreciating portfolio consisting of the relevant Underlying Indices. Therefore, your return on the notes may be less than the return you could realize on an alternative investment in the relevant Underlying Indices that is not subject to daily exposure adjustments. No assurance can be given that the investment strategy used to construct the Index will outperform any alternative investment in the relevant Underlying Indices.

**THE CALCULATION OF THE NOTIONAL FINANCING COST FROM AND INCLUDING AUGUST 4, 2016 TO AND INCLUDING MAY 1, 2017 WAS BASED ON FIXED VALUES INSTEAD OF 2-MONTH AND 3-MONTH USD LIBOR RATES —**

The notional financing cost is intended to approximate the cost of maintaining a position in the Underlying Equity Indices using borrowed funds and is calculated as a composite rate of interest that is intended to track the overnight rate of return of a notional position in a 3-month time deposit in U.S. dollars, which is currently calculated by referencing the 2-month and 3-month USD LIBOR rates. However, from and including August 4, 2016 to and including May 1, 2017, the notional financing cost was calculated using fixed values of 0.6111% and 0.7776% instead of the 2-month and 3-month USD LIBOR rates, respectively. Investors in the notes should bear this difference in mind when evaluating the hypothetical back-tested and historical data shown in the accompanying terms supplement.

**THERE IS NO ASSURANCE THAT THE STRATEGY EMPLOYED BY THE S&P MOMENTUM UNITED STATES LARGEMIDCAP (USD) EXCESS RETURN INDEX WILL BE SUCCESSFUL —**

The S&P Momentum United States LargeMidCap (USD) Excess Return Index, the Underlying Equity Index of the Momentum Sub-Index, is designed to measure the performance of U.S. large- and mid-capitalization companies with relatively higher recent performance compared to the S&P United States LargeMidCap Index. The S&P United States LargeMidCap Index seeks to measure the large- and mid-capitalization U.S. equity market and represents the top 85% of the float-adjusted market capitalization of the S&P United States BMI (Broad Market Index). The Index allocates to the Momentum Sub-Index when it determines the business cycle to be in “Expansion” in an attempt to provide exposure to companies that are moving with a strong and strengthening U.S. economy. There is, however, no assurance that the S&P Momentum United States LargeMidCap (USD) Excess Return Index will outperform any other index or strategy that tracks U.S. stocks selected using other criteria. There is no

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Notes Linked to the S&P Economic Cycle Factor Rotator Index



guarantee that price trends existing in the past will continue in the future. If market conditions do not represent a continuation of prior trends, the level of the S&P Momentum United States LargeMidCap (USD) Excess Return Index may decline. In addition, the S&P Momentum United States LargeMidCap (USD) Excess Return Index is constructed pursuant to a modified market capitalization-weighting methodology. It is possible that the stock selection and weighting methodology of the S&P Momentum United States LargeMidCap (USD) Excess Return Index will adversely affect its return and, consequently, the value of the Index and of the notes.

**THERE IS NO ASSURANCE THAT THE STRATEGY EMPLOYED BY THE S&P 500<sup>®</sup> PURE VALUE EXCESS RETURN INDEX WILL BE SUCCESSFUL —**

The S&P 500<sup>®</sup> Pure Value Excess Return Index, the Underlying Equity Index of the Value Sub-Index, is designed to measure the performance of companies in the S&P 500<sup>®</sup> Index that exhibit relatively strong value characteristics (by reference to (1) book value to price ratio, (2) earnings to price ratio and (3) sales to price ratio) and relatively weak growth characteristics (by reference to EPS growth, sales per share growth and price momentum). The Index allocates to the Value Sub-Index when it determines the business cycle to be in “Recovery” in an attempt to provide exposure to companies that may be undervalued. There is, however, no assurance that the S&P 500<sup>®</sup> Pure Value Excess Return Index will outperform any other index or strategy that tracks U.S. stocks selected using other criteria. The value characteristic referenced by the S&P 500<sup>®</sup> Pure Value Excess Return Index may not be accurate predictors of under-valued stocks, and there is no guarantee that undervalued stocks will appreciate. In addition, the S&P 500<sup>®</sup> Pure Value Excess Return Index’s “pure value” selection methodology includes a strong bias against growth stocks, which might outperform value stocks. Furthermore, the S&P 500<sup>®</sup> Pure Value Excess Return Index is constructed pursuant to a value-based weighting methodology, in which the weights of components are proportional to the strength of their value characteristics. It is possible that the stock selection and weighting methodology of the S&P 500<sup>®</sup> Pure Value Excess Return Index will adversely affect its return and, consequently, the value of the Index and of the notes.

**THERE IS NO ASSURANCE THAT THE STRATEGY EMPLOYED BY THE S&P 500<sup>®</sup> BUYBACK FCF EXCESS RETURN INDEX WILL BE SUCCESSFUL —**

The S&P 500<sup>®</sup> Buyback FCF Excess Return Index, the Underlying Equity Index of the Buyback Sub-Index, is designed to measure the performance of 30 companies (excluding JPMorgan Chase & Co., Visa and their past or present affiliated companies) with relatively higher rates of buying back their own stock, relatively higher levels of trading activity in their stock, and relatively higher free cash flow yields, as compared to the S&P 500<sup>®</sup> Index. The Index allocates to the Buyback Sub-Index when it determines the business cycle to be in “Slowdown” in an attempt to provide exposure to companies that are supporting their stocks through buybacks and have sufficient free cash flow to maintain this program. There is, however, no assurance that stocks with a high free cash flow or with high buyback ratios will continue to have high free cash flow or high buyback ratios or that the S&P 500<sup>®</sup> Buyback FCF Excess Return Index will outperform any other index or strategy that tracks U.S. stocks selected using other criteria. In addition, the S&P 500<sup>®</sup> Buyback FCF Excess Return Index is constructed pursuant to a weighting methodology in which the weights of components are proportional to their free cash flow yields. It is possible that the stock selection and weighting methodology of the S&P 500<sup>®</sup> Buyback FCF Excess Return Index will adversely affect its return and, consequently, the value of the Index and of the notes.

**THERE IS NO ASSURANCE THAT THE STRATEGY EMPLOYED BY THE S&P 500<sup>®</sup> LOW VOLATILITY HIGH DIVIDEND EXCESS RETURN INDEX WILL BE SUCCESSFUL —**

The S&P 500<sup>®</sup> Low Volatility High Dividend Excess Return Index, the Underlying Equity Index of the High Dividend Low Volatility Sub-Index, is designed to measure the performance of the 50 least-volatile among the 75 highest dividend-yielding companies in the S&P 500<sup>®</sup> Index, subject to sector and individual constituent concentration limits. The Index allocates to the High Dividend Low Volatility Sub-Index when it determines the business cycle to be in “Contraction” in an attempt to provide exposure to defensive companies that pay relatively higher dividends and have relatively lower volatility. There is, however, no assurance that the S&P 500<sup>®</sup> Low Volatility High Dividend Excess Return Index will exhibit low volatility or provide higher risk-weighted returns than the S&P 500<sup>®</sup> Index or any other index or strategy. In addition, although the S&P 500<sup>®</sup> Low Volatility High Dividend

Excess Return Index measures the performance of high dividend-yielding companies, the S&P 500<sup>®</sup> Low Volatility High Dividend Excess Return Index will not include any dividends paid on the securities that make up the S&P 500<sup>®</sup> Low Volatility High Dividend Excess Return Index. It is possible that the stock selection and weighting methodology of the S&P 500<sup>®</sup> Low Volatility High Dividend Excess Return Index will adversely affect its return (for example, by providing exposure to stocks that do not perform as well as other stocks with higher volatility or with lower dividend yields) and, consequently, the value of the Index and of the notes.

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

The Underlying Equity Indices are subject to concentration risk —

The strategy employed by each Underlying Equity Index may result in concentration to a significant degree in securities of issuers located in a single industry or sector or a small number of industries or sectors. Under these circumstances, an Underlying Equity Index may face more risks than if it were diversified broadly over numerous industries or sectors. Accordingly, each Underlying Equity Index may be more adversely affected by negative economic, political or regulatory occurrences affecting its constituents and the relevant industries and sectors than a more broadly diversified stock index.

The Underlying Treasury Index is subject to significant risks associated with futures contracts —

The Underlying Treasury Index tracks the returns of futures contracts. The price of a futures contract depends not only on the price of the underlying asset referenced by the futures contract, but also on a range of other factors, including but not limited to changing supply and demand relationships, interest rates, governmental and regulatory policies and the policies of the exchanges on which the futures contracts trade. In addition, the futures markets are subject to temporary distortions or other disruptions due to various factors, including the lack of liquidity in the markets, the participation of speculators and government regulation and intervention. These factors and others can cause the prices of futures contracts to be volatile and could adversely affect the level of the Underlying Treasury Index and the Index and accordingly, any payments on, and the value of, your notes.

UNCERTAINTY ABOUT THE FUTURE OF LIBOR MAY AFFECT 2-MONTH AND 3-MONTH USD LIBOR RATES, WHICH MAY ADVERSELY AFFECT THE INDEX AND THEREFORE THE RETURN ON AND THE MARKET VALUE OF THE NOTES —

On July 27, 2017, the Chief Executive of the U.K. Financial Conduct Authority (the “FCA”), which regulates LIBOR, announced that the FCA intends to stop persuading or compelling banks to submit rates for the calculation of LIBOR rates to the LIBOR administrator after 2021. The announcement indicates that the continuation of LIBOR on the current basis cannot and will not be guaranteed. It is impossible to predict whether and to what extent banks will continue to provide LIBOR submissions to the administrator of LIBOR, whether LIBOR rates will cease to be published or supported before or after 2021 or whether any additional reforms to LIBOR may be enacted in the United Kingdom or elsewhere. At this time, no consensus exists as to what rate or rates may become accepted alternatives to LIBOR and it is impossible to predict the effect of any such alternatives on the notes. Uncertainty as to the nature of alternative reference rates and as to potential changes or other reforms to LIBOR may affect the 2-month and 3-month USD LIBOR rates used to determine the notional financing cost during the term of the notes, which may adversely affect the Index and therefore the return on and market value of the notes. Any successor or replacement interest rates may perform differently from the 2-month and 3-month USD LIBOR rates, which may adversely affect the Index and therefore the return on and the market value of the notes.

HYPOTHETICAL BACK-TESTED DATA RELATING TO THE INDEX DO NOT REPRESENT ACTUAL HISTORICAL DATA AND ARE SUBJECT TO INHERENT LIMITATIONS —

The hypothetical back-tested performance of the Index set forth under “Hypothetical Back-Tested Data and Historical Information” in this pricing supplement is purely theoretical and does not represent the actual historical performance of the Index and has not been verified by an independent third party.

Alternative modeling techniques or assumptions may produce different hypothetical historical information that might prove to be more appropriate and that might differ significantly from the hypothetical historical information set forth under “Hypothetical Back-Tested Data and Historical Information” in this pricing supplement. In addition, back-tested, hypothetical historical results have inherent limitations. These back-tested results are achieved by means of a retroactive application of a back-tested model designed with the benefit of hindsight. In addition, the selection methodologies of the S&P 500<sup>®</sup> Buyback FCF Excess Return Index and the S&P 500<sup>®</sup> Pure Value Excess Return Index reference financial information reported by the issuers of the securities that are eligible to be included in the relevant index, and the selection methodology applied with respect to any period of back-tested performance could reflect subsequent restatements or corrections of that financial information, even though those restatements or

corrections would not have been available had the relevant index been calculated on a live basis. As with actual historical data, hypothetical back-tested data should not be taken as an indication of future performance.

OTHER KEY RISKS:

- THE INDEX AND THE SUB-INDICES WERE ESTABLISHED ON AUGUST 16, 2016, AND SOME OF THE UNDERLYING INDICES WERE ESTABLISHED RECENTLY, AND THEREFORE THE INDEX, THE SUB-INDICES AND THOSE UNDERLYING INDICES HAVE A LIMITED OPERATING HISTORY AND MAY PERFORM IN UNANTICIPATED WAYS.

○ THE UNDERLYING TREASURY INDEX IS AN “EXCESS RETURN” INDEX AND NOT A “TOTAL RETURN” INDEX BECAUSE IT DOES NOT REFLECT INTEREST THAT COULD BE EARNED ON FUNDS NOTIONALLY COMMITTED TO THE TRADING OF FUTURES CONTRACTS.

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

NEGATIVE ROLL RETURNS ASSOCIATED WITH FUTURES CONTRACTS MAY ADVERSELY AFFECT  
○ THE PERFORMANCE OF THE UNDERLYING TREASURY INDEX AND THE VALUE OF THE NOTES.

SUSPENSION OR DISRUPTIONS OF MARKET TRADING IN FUTURES CONTRACTS MAY ADVERSELY  
○ AFFECT THE VALUE OF YOUR NOTES.

THE NOTES ARE SUBJECT TO SIGNIFICANT RISKS ASSOCIATED WITH FIXED-INCOME SECURITIES,  
○ INCLUDING INTEREST RATE-RELATED RISKS.

THE VALUE OF THE NOTES MAY BE INFLUENCED BY UNPREDICTABLE CHANGES IN THE U.S.  
○ GOVERNMENT AND ECONOMY.

THE UNDERLYING TREASURY INDEX MAY BE AFFECTED BY CHANGES IN THE PERCEIVED  
○ CREDITWORTHINESS OF THE UNITED STATES.

2-MONTH AND 3-MONTH USD LIBOR RATES ARE AFFECTED BY A NUMBER OF FACTORS AND MAY  
○ BE VOLATILE.

THE METHOD PURSUANT TO WHICH THE LIBOR RATES ARE DETERMINED MAY CHANGE, AND  
○ ANY SUCH CHANGE MAY ADVERSELY AFFECT THE VALUE OF THE NOTES.

*Please refer to the “Risk Factors” section of the accompanying underlying supplement for more details regarding the above-listed and other risks.*

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

### Hypothetical Back-Tested Data and Historical Information

The following graph sets forth the hypothetical back-tested performance of the Index based on the hypothetical back-tested weekly closing levels of the Index from January 3, 2014 through August 12, 2016, and the historical performance of the Index based on the weekly historical closing levels of the Index from August 19, 2016 through April 18, 2019. U.S. equity markets were closed on April 19, 2019 in observance of Good Friday. The Index was established on August 16, 2016, as represented by the vertical line in the following graph. All data to the left of that vertical line reflect hypothetical back-tested performance of the Index. All data to the right of that vertical line reflect actual historical performance of the Index. The closing level of the Index on April 25, 2019 was 394.212. We obtained the closing levels above and below from the Bloomberg Professional® service (“Bloomberg”), without independent verification.

The data for the hypothetical back-tested performance of the Index set forth in the following graph are purely theoretical and do not represent the actual historical performance of the Index. See “Selected Risk Considerations — Risks Relating to the Index — Hypothetical Back-Tested Data Relating to the Index Do Not Represent Actual Historical Data and Are Subject to Inherent Limitations” above.

The hypothetical back-tested and historical closing levels of the Index should not be taken as an indication of future performance, and no assurance can be given as to the closing level of the Index on the Pricing Date or the Observation Date. There can be no assurance that the performance of the Index will result in a payment at maturity in excess of your principal amount.

The hypothetical back-tested closing levels of the Index have inherent limitations and have not been verified by an independent third party. These hypothetical back-tested closing levels are determined by means of a retroactive application of a back-tested model designed with the benefit of hindsight. Hypothetical back-tested results are neither an indicator nor a guarantee of future returns. No representation is made that an investment in the notes will or is likely to achieve returns similar to those shown. Alternative modeling techniques or assumptions would produce different hypothetical back-tested closing levels of the Index that might prove to be more appropriate and that might differ significantly from the hypothetical back-tested closing levels of the Index set forth above.

### Taxed as Contingent Payment Debt Instruments

You should review carefully the section entitled “Material U.S. Federal Income Tax Consequences,” and in particular the subsection thereof entitled “— Tax Consequences to U.S. Holders — Notes with a Term of More than One Year — Notes Treated as Contingent Payment Debt Instruments,” in the accompanying product supplement no. 3-I. Unlike a traditional debt instrument that provides for periodic payments of interest at a single fixed rate, with respect to which a cash-method investor generally recognizes income only upon receipt of stated interest, our special tax counsel, Davis Polk & Wardwell LLP, is of the opinion that the notes will be treated for U.S. federal income tax purposes as “contingent payment debt instruments.” As discussed in that subsection, you generally will be required to accrue original issue discount on your notes in each taxable year at the “comparable yield,” as determined by us, although we will not make any payment with respect to the notes until maturity. Upon sale or exchange (including at maturity), you will recognize taxable income or loss equal to the difference between the amount received from the sale or exchange and your adjusted basis in the

Notes Linked to the S&P Economic Cycle Factor Rotator Index

note, which generally will equal the cost thereof, increased by the amount of original issue discount you have accrued in respect of the note. You generally must treat any income as interest income and any loss as ordinary loss to the extent of previous interest inclusions, and the balance as capital loss. The deductibility of capital losses is subject to limitations. The discussions herein and in the accompanying product supplement do not address the consequences to taxpayers subject to special tax accounting rules under Section 451(b) of the Code. Purchasers who are not initial purchasers of notes at their issue price should consult their tax advisers with respect to the tax consequences of an investment in notes, including the treatment of the difference, if any, between the basis in their notes and the notes' adjusted issue price.

Section 871(m) of the Code and Treasury regulations promulgated thereunder ("Section 871(m)") generally impose a 30% withholding tax (unless an income tax treaty applies) on dividend equivalents paid or deemed paid to Non-U.S. Holders with respect to certain financial instruments linked to U.S. equities or indices that include U.S. equities. Section 871(m) provides certain exceptions to this withholding regime, including for instruments linked to certain broad-based indices that meet requirements set forth in the applicable Treasury regulations (such as an index, a "Qualified Index"). Additionally, a recent IRS notice excludes from the scope of Section 871(m) instruments issued prior to January 1, 2021 that do not have a delta of one with respect to underlying securities that could pay U.S.-source dividends for U.S. federal income tax purposes (each an "Underlying Security"). Based on certain determinations made by us, we expect that Section 871(m) will not apply to the notes with regard to Non-U.S. Holders. Our determination is not binding on the IRS, and the IRS may disagree with this determination. Section 871(m) is complex and its application may depend on your particular circumstances, including whether you enter into other transactions with respect to an Underlying Security. If necessary, further information regarding the potential application of Section 871(m) will be provided in the pricing supplement for the notes. You should consult your tax adviser regarding the potential application of Section 871(m) to the notes.

Withholding under legislation commonly referred to as "FATCA" may apply to the payment on your notes at maturity, as well as to the gross proceeds of a sale or other disposition of a note prior to maturity, although under recently proposed regulations (the preamble to which specifies that taxpayers are permitted to rely on them pending finalization), no withholding will apply to payments of gross proceeds (other than any amount treated as interest). You should consult your tax adviser regarding the potential application of FATCA to the notes.

The discussions in the preceding paragraphs, when read in combination with the section entitled "Material U.S. Federal Income Tax Consequences" (and in particular the subsection thereof entitled "— Tax Consequences to U.S. Holders — Notes with a Term of More than One Year — Notes Treated as Contingent Payment Debt Instruments") in the accompanying product supplement, constitute the full opinion of Davis Polk & Wardwell LLP regarding the material U.S. federal income tax consequences of owning and disposing of notes.

#### Comparable Yield and Projected Payment Schedule

We will determine the comparable yield for each series of the notes and will provide those comparable yields, and the related projected payment schedules, in the pricing supplement for the notes, which we will file with the SEC. If the notes had priced on April 25, 2019 and we had determined the comparable yields on that date, they would have been an annual rate of 2.88% for the 3.5-Year Notes, 3.13% for the 5-Year Notes, and 3.40% for the 7-Year Notes, compounded semiannually. The actual comparable yields that we will determine for the notes may be higher or lower than 2.88% for the 3.5-Year Notes, 3.13% for the 5-Year Notes or 3.40% for the 7-Year Notes, and will depend upon a variety of factors, including actual market conditions and our borrowing costs for debt instruments of comparable maturities. **Neither the comparable yield nor the projected payment schedule for a series of notes constitutes a representation by us regarding the actual Additional Amount, if any, that we will pay on that series of the notes.**

#### The Estimated Value of the Notes



The estimated value of the notes set forth on the cover of this pricing supplement is equal to the sum of the values of the following hypothetical components: (1) a fixed-income debt component with the same maturity as the notes, valued using the internal funding rate described below, and (2) the derivative or derivatives underlying the economic terms of the notes. The estimated value of the notes does not represent a minimum price at which JPMS would be willing to buy your notes in any secondary market (if any exists) at any time. The internal funding rate used in the determination of the estimated value of the notes may differ from the market-implied funding rate for vanilla fixed rate debt instruments of a similar maturity issued by JPMorgan Chase & Co. or its affiliates. Any difference may be based on, among other things, our and our affiliates' view of the funding value of the notes as well as the higher issuance, operational and ongoing liability management costs of the notes in comparison to those costs for the conventional fixed income instruments of JPMorgan Chase & Co. This internal funding rate is based on certain market inputs and assumptions, which may prove to be incorrect, and is intended to approximate the prevailing market replacement funding rate for the notes. The use of an internal funding rate and any potential changes to that rate may have an adverse effect on the terms of the notes and any secondary market

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

prices of the notes. For additional information, see “Selected Risk Considerations — The Estimated Value of the Notes Is Derived by Reference to an Internal Funding Rate” in this pricing supplement.

The value of the derivative or derivatives underlying the economic terms of the notes is derived from internal pricing models of our affiliates. These models are dependent on inputs such as the traded market prices of comparable derivative instruments and on various other inputs, some of which are market-observable, and which can include volatility, dividend rates, interest rates and other factors, as well as assumptions about future market events and/or environments. Accordingly, the estimated value of the notes is determined when the terms of the notes are set based on market conditions and other relevant factors and assumptions existing at that time.

The estimated value of the notes does not represent future values of the notes and may differ from others’ estimates. Different pricing models and assumptions could provide valuations for the notes that are greater than or less than the estimated value of the notes. In addition, market conditions and other relevant factors in the future may change, and any assumptions may prove to be incorrect. On future dates, the value of the notes could change significantly based on, among other things, changes in market conditions, our or JPMorgan Chase & Co.’s creditworthiness, interest rate movements and other relevant factors, which may impact the price, if any, at which JPMS would be willing to buy notes from you in secondary market transactions.

The estimated value of the notes will be lower than the original issue price of the notes because costs associated with selling, structuring and hedging the notes are included in the original issue price of the notes. These costs include the selling commissions paid to JPMS and other affiliated or unaffiliated dealers, the projected profits, if any, that our affiliates expect to realize for assuming risks inherent in hedging our obligations under the notes and the estimated cost of hedging our obligations under the notes. Because hedging our obligations entails risk and may be influenced by market forces beyond our control, this hedging may result in a profit that is more or less than expected, or it may result in a loss. A portion of the profits, if any, realized in hedging our obligations under the notes may be allowed to other affiliated or unaffiliated dealers, and we or one or more of our affiliates will retain any remaining hedging profits. See “Selected Risk Considerations — The Estimated Value of the Notes Will Be Lower Than the Original Issue Price (Price to Public) of the Notes” in this pricing supplement.

#### Secondary Market Prices of the Notes

For information about factors that will impact any secondary market prices of the notes, see “Risk Factors — Risks Relating to the Estimated Value and Secondary Market Prices of the Notes — Secondary market prices of the notes will be impacted by many economic and market factors” in the accompanying product supplement. In addition, we generally expect that some of the costs included in the original issue price of the notes will be partially paid back to you in connection with any repurchases of your notes by JPMS in an amount that will decline to zero over an initial predetermined period. These costs can include selling commissions, projected hedging profits, if any, and, in some circumstances, estimated hedging costs and our internal secondary market funding rates for structured debt issuances. This initial predetermined time period is intended to be the shorter of six months and one-half of the stated term of the notes. The length of any such initial period reflects the structure of the notes, whether our affiliates expect to earn a profit in connection with our hedging activities, the estimated costs of hedging the notes and when these costs are incurred, as determined by our affiliates. See “Selected Risk Considerations — The Value of the Notes as Published by JPMS (and Which May Be Reflected on Customer Account Statements) May Be Higher Than the Then-Current Estimated Value of the Notes for a Limited Time Period” in this pricing supplement.

#### Supplemental Use of Proceeds

The notes are offered to meet investor demand for products that reflect the risk-return profile and market exposure provided by the notes. See “Hypothetical Payout Profile” and “How the Notes Work” in this pricing supplement for an illustration of the risk-return profile of the notes and “The S&P Economic Cycle Factor Rotator Index” in this pricing

supplement for a description of the market exposure provided by the notes.

The original issue price of the notes is equal to the estimated value of the notes plus the selling commissions paid to JPMS and other affiliated or unaffiliated dealers, plus (minus) the projected profits (losses) that our affiliates expect to realize for assuming risks inherent in hedging our obligations under the notes, plus the estimated cost of hedging our obligations under the notes.

### **Supplemental Plan of Distribution**

We expect that delivery of the notes will be made against payment for the notes on or about the Original Issue Date set forth on the front cover of this pricing supplement, which will be the third business day following the Pricing Date of the notes (this settlement cycle being referred to as “T+3”). Under Rule 15c6-1 of the Securities Exchange Act of 1934, as amended, trades in the secondary market

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Notes Linked to the S&P Economic Cycle Factor Rotator Index

generally are required to settle in two business days, unless the parties to that trade expressly agree otherwise. Accordingly, purchasers who wish to trade notes on any date prior to two business days before delivery will be required to specify an alternate settlement cycle at the time of any such trade to prevent a failed settlement and should consult their own advisors.

#### Additional Terms Specific to the Notes

You may revoke your offer to purchase the notes at any time prior to the time at which we accept such offer by notifying the applicable agent. We reserve the right to change the terms of, or reject any offer to purchase, the notes prior to their issuance. In the event of any changes to the terms of the notes, we will notify you and you will be asked to accept such changes in connection with your purchase. You may also choose to reject such changes, in which case we may reject your offer to purchase.

You should read this pricing supplement together with the accompanying prospectus, as supplemented by the accompanying prospectus supplement relating to our Series A medium-term notes of which these notes are a part, and the more detailed information contained in the accompanying product supplement and the accompanying underlying supplement. This pricing supplement, together with the documents listed below, contains the terms of the notes and supersedes all other prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials of ours. You should carefully consider, among other things, the matters set forth in the “Risk Factors” sections of the accompanying product supplement and the accompanying underlying supplement, as the notes involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisers before you invest in the notes.

You may access these documents on the SEC website at [www.sec.gov](http://www.sec.gov) as follows (or if such address has changed, by reviewing our filings for the relevant date on the SEC website):

Product supplement no. 3-I dated April 5, 2018:

[http://www.sec.gov/Archives/edgar/data/19617/000095010318004518/dp87527\\_424b2-ps3i.pdf](http://www.sec.gov/Archives/edgar/data/19617/000095010318004518/dp87527_424b2-ps3i.pdf)

Underlying supplement no. 2-I dated April 5, 2018:

[http://www.sec.gov/Archives/edgar/data/19617/000095010318004515/dp89175\\_424b2-2isp.pdf](http://www.sec.gov/Archives/edgar/data/19617/000095010318004515/dp89175_424b2-2isp.pdf)

Prospectus supplement and prospectus, each dated April 5, 2018:

[http://www.sec.gov/Archives/edgar/data/19617/000095010318004508/dp87767\\_424b2-ps.pdf](http://www.sec.gov/Archives/edgar/data/19617/000095010318004508/dp87767_424b2-ps.pdf)

Our Central Index Key, or CIK, on the SEC website is 1665650, and JPMorgan Chase & Co.’s CIK is 19617. As used in this pricing supplement, “we,” “us” and “our” refer to JPMorgan Financial.

GIN-RIGHT: 0pt" align="right">(1,419	
)	
	142,613
	(1,179
)	
Total non-operating income (expenses), net	
	(216,000
)	
	224,321
	(48,340
)	
	68,354
Income (loss) before income tax	
	(11,834,961
)	
	6,046,327
	(7,152,766
)	
	4,073,244
Income tax expense (benefits)	
	(1,328,059
)	
	966,306
	(647,160
)	
	696,786
Income (loss) from operations	

)	(10,506,902
)	5,080,021
)	(6,505,606
)	3,376,458
Less: Income (loss) attributable to noncontrolling interest	
)	(134,724
)	14,730
)	(87,230
)	14,248
Net income (loss) to SmartHeat Inc.	
)	(10,372,178
)	5,065,291
)	(6,418,376
)	3,362,210
Other comprehensive item	
Foreign currency translation gain	
)	3,625,300
)	512,851
)	1,832,070
)	489,797
Comprehensive Income (Loss)	
\$	(6,746,878

)	
\$	5,578,142
\$	(4,586,306)
)	
\$	3,852,007
Basic weighted average shares outstanding	
	38,572,381
	32,800,818
	38,592,598
	32,806,048
Diluted weighted average shares outstanding	
	38,572,381
	32,854,058
	38,592,598
	32,832,633
Basic earnings (loss) per share	
\$	(0.27)
)	
\$	0.15
\$	(0.17)
)	
\$	0.10
Diluted earnings (loss) per share	
\$	

)	(0.27
\$	0.15
\$	(0.17
)	
\$	0.10

The accompanying notes are an integral part of these financial statements.



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## SMARTHEAT INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS  
(UNAUDITED)

	SIX MONTHS ENDED JUNE	
	30,	
	2011	2010
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>		
Income (loss) including noncontrolling interest	\$ (10,506,902)	\$ 5,080,021
Adjustments to reconcile income (loss) including noncontrolling interest to net cash used in operating activities:		
Depreciation and amortization	846,867	470,404
Unearned interest on accounts receivable	(51,955)	(25,023)
Stock based compensation expense	253,232	73,064
Changes in deferred tax	(1,344,853)	(15,032)
(Increase) decrease in current assets:		
Accounts receivable, net	5,243,426	7,487,830
Retentions receivable	(465,697)	(1,096,277)
Advances to suppliers	(10,382,745)	(6,104,038)
Other receivables, prepayments and deposits	1,412,427	1,406,764
Inventories	(9,186,101)	(11,009,976)
Increase (decrease) in current liabilities:		
Accounts payable	2,280,976	(71,654)
Advance from customers	717,616	1,327,817
Taxes payable	(2,823,643)	(843,313)
Accrued liabilities and other payables	(940,503)	(3,283,123)
<b>Net cash used in operating activities</b>	<b>(24,947,855)</b>	<b>(6,602,536)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Change in restricted cash	(418,844)	595,152
Deposit for equipment purchase	-	(5,370,066)
Acquisition of property & equipment	(2,135,598)	(324,587)
Acquisition of intangible asset	(97,420)	(102,666)
Notes receivable	531,133	-
Cash acquired from acquisition	448,849	-
Cash paid at acquisition	(13,536,914)	-
Construction in progress	(432,405)	(32,850)
<b>Net cash used in investing activities</b>	<b>(15,641,199)</b>	<b>(5,235,017)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>		
Warrants exercised	-	85,500
Proceeds from short-term loan	5,461,309	-
Repayment to short-term loan	-	(4,248,960)
Cash contribution from noncontrolling interest	749,303	-
Payment on notes payable	(2,051,360)	(1,653,077)

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Net cash provided by (used in) financing activities	4,159,252	(5,816,537)
EFFECT OF EXCHANGE RATE CHANGE ON CASH & EQUIVALENTS	808,551	133,320
NET DECREASE IN CASH & EQUIVALENTS	(35,621,251)	(17,520,770)
CASH & EQUIVALENTS, BEGINNING OF PERIOD	56,806,471	48,967,992
CASH & EQUIVALENTS, END OF PERIOD	\$ 21,185,220	\$ 31,447,222
Supplemental cash flow data:		
Income tax paid	\$ 135,449	\$ 1,441,940
Interest paid	\$ 293,816	\$ 80,837

The accompanying notes are an integral part of these financial statements.

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SMARTHEAT INC. AND SUBSIDIARIES  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
JUNE 30, 2011 (UNAUDITED) AND 2010

1. ORGANIZATION AND DESCRIPTION OF BUSINESS

SmartHeat Inc., formerly known as Pacific Goldrim Resources, Inc. (the “Company” or “SmartHeat”), was incorporated on August 4, 2006, in the State of Nevada. The Company, through its operating subsidiaries in China and Germany, designs, manufactures, sells and services plate heat exchangers (“PHEs”), PHE Units, which combine PHEs with various pumps, temperature sensors, valves and automated control systems, heat meters and heat pumps for use in commercial and residential buildings.

On April 14, 2008, the Company entered into a Share Exchange Agreement (the “Share Exchange Agreement”) with Shenyang Taiyu Machinery and Electronic Equipment Co., Ltd. (“Taiyu”) and the Taiyu Shareholders. Pursuant to the Share Exchange Agreement, all of the equitable and legal rights, title and interests in and to Taiyu’s share capital of Yuan 25,000,000 were exchanged for 18,500,000 shares of SmartHeat’s common stock (the “Share Exchange”). Concurrent with the Share Exchange, one of SmartHeat’s shareholders cancelled 2,500,000 shares of the 6,549,900 issued and outstanding shares of SmartHeat common stock pursuant to a split-off agreement dated April 14, 2008. As a result of the Share Exchange, Taiyu became a wholly owned subsidiary of SmartHeat.

Prior to the acquisition of Taiyu, the Company was a non-operating public shell. Pursuant to Securities and Exchange Commission (“SEC”) rules, the merger or acquisition of a private operating company into or by a non-operating public shell with nominal net assets was considered a capital transaction rather than a business combination. Accordingly, for accounting purposes the transaction was treated as a reverse acquisition and recapitalization and pro-forma information was not presented. Transaction costs incurred in the reverse acquisition were expensed.

Taiyu was incorporated in Liaoning Province, China in July 2002. Taiyu manufactures and sells PHEs, PHE Units and heat meters. The Company is an authorized dealer of Sondex brand PHEs; Sondex is the second largest PHE plate manufacturer in the world.

On September 25, 2008, the Company entered into a Share Exchange Agreement (the “SanDeKe Agreement”) with Asialink (Far East) Limited (“Asialink”) to acquire all of the outstanding capital stock of SanDeKe Co., Ltd., a Shanghai-based manufacturer of PHEs (“SanDeKe”). The purchase price for SanDeKe was \$741,516. Under the terms of the SanDeKe Agreement, two shareholders of SanDeKe agreed not to compete with SanDeKe’s business for four years after SanDeKe was purchased.

On June 12, 2009, the Company incorporated a new subsidiary, SmartHeat Siping Beifang Energy Technology Co., Ltd. (“SmartHeat Siping”), to manufacture PHEs.

On June 16, 2009, Taiyu closed an asset purchase transaction with Siping Beifang Heat Exchanger Manufacture Co., Ltd. (“Siping Beifang”), a company organized under the laws of the People’s Republic of China (“PRC”), to purchase certain assets consisting of the plant, equipment and certain land use rights for RMB 54,000,000 (\$7,906,296). Taiyu then transferred all the acquired assets to SmartHeat Siping, the newly incorporated subsidiary. The Company paid RMB 7,250,000 (\$1,061,500) upon the completion of inventory inspection. At June 30, 2011, the Company has paid in full the remaining purchase consideration.

On August 14, 2009, the Company formed Beijing SmartHeat Jinhui Energy Technology Co., Ltd. (“Jinhui”), a joint venture in Beijing with registered capital of RMB 10 million (\$1.46 million), to provide consulting services and expand the Company’s sales of PHEs into new industries and regions of China. SmartHeat owns 52% of Jinhui and

invested approximately \$765,000.

On April 7, 2010, the Company formed SmartHeat (China) Investment Co., Ltd. (“SmartHeat Investment”), an investment holding company and wholly owned subsidiary in Shenyang with registered capital of \$70 million.

On April 12, 2010, SmartHeat Investment formed SmartHeat (Shenyang) Energy Equipment Co., Ltd. (“SmartHeat Energy”), a wholly owned subsidiary in Shenyang with registered capital of \$30 million, for the research, development, manufacturing and sales of energy products.

On May 6, 2010, SmartHeat formed SmartHeat (Shanghai) Trading Co., Ltd. (“SmartHeat Trading”) through a nominee to market and expand sales of the Company’s Taiyu-branded products. The Company made a capital contribution of \$1.5 million and is entitled to 100% of the profit or loss of SmartHeat Trading.

In January 2011, the Company invested \$771,658 for 51% of the equity interest in a newly formed joint venture, Hohhot Ruicheng Technology Co., Ltd. (“Ruicheng”), in Hohhot City, China for the design and manufacture of heat meters.

On March 3, 2011, the Company completed the acquisition of Gustrower Warmepumpen GmbH (“GWP”), a designer and manufacturer of high efficiency heat pumps in Germany, from Conergy AG. This acquisition will extend the Company’s clean technology heating solutions into the rapidly growing heat pump markets in Europe and China, enabling its customers to purchase technologically advanced heat pumps at competitive prices. The price was EUR 4,248,082 (\$5,898,887) and was paid at closing.

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On March 1, 2011, the Company entered into a purchase agreement with Shenyang Bingchuan Refrigerating Machine Limited Company (“Bingchuan”), a Shenyang-based state-owned heat pump manufacturer and designer. The Company paid RMB 50 million (\$7.6 million) to acquire 95% of the equity interest in Bingchuan; the local government will retain the remaining 5% equity interest.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of SmartHeat’s U.S. parent, Taiyu, SanDeKe, SmartHeat Siping, Jinhui, SmartHeat Investment, SmartHeat Energy, SmartHeat Trading, Ruicheng, GWP and Bingchuan. The “Company” refers collectively to SmartHeat’s U.S. parent, Taiyu, SanDeKe, SmartHeat Siping, Jinhui, SmartHeat Investment, SmartHeat Energy, SmartHeat Trading, Ruicheng, GWP and Bingchuan. All significant intercompany accounts and transactions were eliminated in consolidation.

Noncontrolling Interest

Effective January 1, 2009, the Company adopted Financial Accounting Standards Board’s (“FASB”) Accounting Standards Codification (“ASC”) Topic 810, “Consolidation,” which established new standards governing the accounting for and reporting of noncontrolling interests (NCIs) in partially owned consolidated subsidiaries and the loss of control of subsidiaries. Certain provisions of this standard indicate, among other things, that NCIs, previously referred to as minority interests, be treated as a separate component of equity, not as a liability, as was previously the case, that increases and decreases in the parent’s ownership interest that leave control intact be treated as equity transactions rather than as step acquisitions or dilution gains or losses and that losses of a partially owned consolidated subsidiary be allocated to the NCI even when such allocation might result in a deficit balance. This standard also required changes to certain presentation and disclosure requirements. Losses attributable to the NCI in a subsidiary may exceed the NCI’s interests in the subsidiary’s equity. The excess attributable to the NCI is attributed to those interests. The NCI shall continue to be attributed its share of losses even if that attribution results in a deficit NCI balance.

Use of Estimates

In preparing the financial statements in conformity with U.S. generally accepted accounting principles (“U.S. GAAP”), management makes estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the dates of the financial statements, as well as the reported amounts of revenues and expenses during the reporting year. Significant estimates, required by management, include the recoverability of long-lived assets, allowance for doubtful accounts and the reserve for obsolete and slow-moving inventories. Actual results could differ from those estimates.

Cash and Equivalents

For purposes of the statement of cash flows, the Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. As of June 30, 2011, the Company maintained restricted cash of \$2.9 million in several bank accounts, of which \$1.25 million was cash deposits from customers for securing payment from such customers no later than the warranty period expiration and approximately \$1.68 million was deposits the Company paid to a commercial bank for the bank issuing bank acceptances to the Company’s vendors. Of

the total restricted cash at June 30, 2011, \$2.8 million will be released to the Company within one year. As of December 31, 2010, the Company maintained restricted cash of \$2.5 million in several bank accounts, of which \$1.05 million was cash deposits from customers for securing payment from such customers no later than the warranty period expiration and approximately \$1.40 million was deposits the Company paid to a commercial bank for the bank issuing bank acceptances to the Company's vendors. Of the total restricted cash at December 31, 2010, \$1.9 million will be released to the Company within one year.

#### Accounts and Retentions Receivable

The Company maintains reserves for potential credit losses on accounts receivable. Management reviews the composition of accounts receivable and analyzes historical bad debts, customer concentrations, customer credit worthiness, current economic trends and changes in customer payment patterns to evaluate the adequacy of these reserves. Based on historical collection activity, the Company had allowances of \$8.6 million and \$2.3 million at June 30, 2011, and December 31, 2010, respectively.

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At June 30, 2011, and December 31, 2010, the Company had retentions receivable from customers for product quality assurance of \$4.2 million and \$3.6 million, respectively. The retention rate varies from 5% to 20% of the sales price with variable terms from 3 months to 2 years depending on the shipping date of the products and the number of heating seasons that the warranty period covers.

Accounts receivable is net of unearned interest of \$24,356 and \$81,041 at June 30, 2011, and December 31, 2010, respectively. Unearned interest is imputed interest on accounts receivable with due dates over 1 year from the invoice date discounted at the Company's borrowing rate, which was 6.31% at June 30, 2011, and December 31, 2010.

Advance to Suppliers

The Company makes advances to certain vendors to purchase its material and equipment. The advances are interest-free and unsecured.

Inventories

Inventories are valued at the lower of cost or market, with cost determined on a moving weighted average basis. Cost of work in progress and finished goods comprises direct material, direct labor and an allocated portion of production overheads.

Property and Equipment

Property and equipment are stated at cost, net of accumulated depreciation. Expenditures for maintenance and repairs are expensed as incurred; additions, renewals and betterments are capitalized. When property and equipment are retired or otherwise disposed of, the related cost and accumulated depreciation are removed from the respective accounts and any gain or loss is included in operations. Depreciation of property and equipment is provided using the straight-line method with a 10% salvage value and estimated lives as follows:

Building	20 years
Vehicles	5 years
Office Equipment	5 years
Production Equipment	5-10 years

Land Use Rights

Right to use land is stated at cost less accumulated amortization. Amortization is provided using the straight-line method over 50 years.

Impairment of Long-Lived Assets

Long-lived assets, which include property, plant and equipment and intangible assets, are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable.

Recoverability of long-lived assets to be held and used is measured by comparing the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset

exceeds its estimated undiscounted future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the assets. Fair value is generally determined using the asset's expected future discounted cash flows or market value, if readily determinable. Based on its review, the Company believes that, as of June 30, 2011, and December 31, 2010, there were no significant impairments of its long-lived assets.

#### Warranties

The Company offers to all customers standard warranties on its products for one or two heating seasons depending on the terms negotiated. The Company accrues for warranty costs based on estimates of the costs that may be incurred under its warranty obligations. The warranty expense and related accrual is included in the Company's selling expenses and other payables respectively, and is recorded when revenue is recognized. Factors that affect the Company's warranty liability include the number of units sold, its estimates of anticipated rates of warranty claims, costs per claim and estimated support labor costs and the associated overhead. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary.



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Activity in the Company's warranty reserve during the periods ended June 30, 2011, and December 31, 2010, is as follows:

	2011	2010
Beginning balance	\$ 398,292	\$ 675,562
Provisions made or adjusted	(135,403)	(277,270)
Actual costs incurred	(168,187)	-
Ending balance in current liabilities	\$ 94,702	\$ 398,292

#### Research and Development Costs

Research and development costs are expensed as incurred and included in general and administrative expenses. These costs primarily consist of cost of materials used and salaries paid for the development department of the Company and fees paid to third parties. Research and development costs for the six months ended June 30, 2011 and 2010, were \$512,867 and \$290,573, respectively. Research and development costs for the three months ended June 30, 2011 and 2010, were \$383,885 and \$0, respectively.

#### Income Taxes

The Company utilizes Statement of Financial Accounting Standards ("SFAS") No. 109, "Accounting for Income Taxes" (codified in FASB ASC Topic 740), which requires recognition of deferred tax assets and liabilities for expected future tax consequences of events included in the financial statements or tax returns. Under this method, deferred income taxes are recognized for the tax consequences in future years of differences between the tax bases of assets and liabilities and their financial reporting amounts at each period end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized.

The Company adopted the provisions of the FASB Interpretation No. 48, Accounting for Uncertainty in Income Taxes (codified in FASB ASC Topic 740). When tax returns are filed, it is highly certain that some positions taken would be sustained upon examination by the taxing authorities, while others are subject to uncertainty about the merits of the position taken or the amount of the position that would be ultimately sustained. The benefit of a tax position is recognized in the financial statements in the period during which, based on all available evidence, management believes it is more likely than not that the position will be sustained upon examination, including the resolution of appeals or litigation processes, if any. Tax positions taken are not offset or aggregated with other positions. Tax positions that meet the more-likely-than-not recognition threshold are measured as the largest amount of tax benefit that is more than 50 percent likely of being realized upon settlement with the applicable taxing authority. The portion of the benefits associated with tax positions taken that exceeds the amount measured as described above is reflected as a liability for unrecognized tax benefits in the accompanying balance sheets along with any associated interest and penalties that would be payable to the taxing authorities upon examination.

Interest associated with unrecognized tax benefits is classified as interest expense and penalties are classified as selling, general and administrative expense in the statements of income. The adoption of FIN 48 did not have a material impact on the Company's financial statements. At June 30, 2011, and December 31, 2010, the Company had not taken any significant uncertain tax position on its tax return for 2010 and prior years or in computing its tax provision for 2010.

## Revenue Recognition

The Company's revenue recognition policies are in compliance with SEC Staff Accounting Bulletin ("SAB") 104 (codified in FASB ASC Topic 605). Sales revenue is recognized when PHEs and heat meters are delivered, and for PHE Units when customer acceptance occurs, the price is fixed or determinable, no other significant obligations of the Company exist and collectability is reasonably assured. Payments received before all of the relevant criteria for revenue recognition met are recorded as unearned revenue.

The Company's sales generally provide for 30% of the purchase price on placement of an order, 30% on delivery, 30% upon installation and acceptance of the equipment after customer testing and 10% no later than the termination of the standard warranty period, which ranges from 3 to 24 months from the acceptance date.

Sales revenue is the invoiced value of goods, net of value-added tax ("VAT"). All of the Company's products sold in the PRC are subject to a VAT of 17% of the gross sales price. This VAT may be offset by the VAT paid by the Company on raw materials and other materials included in the cost of producing the Company's finished product. The Company recorded VAT payable and VAT receivable net of payments in the financial statements. The VAT tax return is filed offsetting the payables against the receivables.

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Sales and purchases are recorded net of VAT collected and paid as the Company acts as an agent for the government. VAT taxes are not affected by the income tax holiday.

We anticipate collecting our VAT receivable within one year. We do not experience credit losses with respect to our VAT receivables because they are owed to us by the PRC government. We classify our VAT receivable as a current asset because it is an asset that is reasonably expected to be realized (or sold or consumed) within one year or within our normal operating cycle.

Sales returns and allowances were \$0 for the six months ended June 30, 2011 and 2010. Sales returns and allowances were \$0 for the three months ended June 30, 2011 and 2010. The Company does not provide a right of return, price protection or any other concessions to its customers.

The Company provides a standard warranty to all customers, which is not considered an additional service; rather, an integral part of the product's sale. The Company believes the existence of its standard product warranty in a sales contract does not constitute a deliverable in the arrangement and thus there is no need to apply the EITF 00-21 (codified in FASB ASC Topic 605-25) separation and allocation model for a multiple deliverable arrangement. SFAS 5 (codified in FASB ASC Topic 450) specifically addresses the accounting for standard warranties and neither SAB 104 nor EITF 00-21 supersedes SFAS 5. The Company believes that accounting for its standard warranty pursuant to SFAS 5 does not impact revenue recognition because the cost of honoring the warranty can be reliably estimated.

The Company charges for after-sales services provided after the expiration of the warranty period, with after-sales services mainly consisting of cleaning PHEs and repairing and exchanging parts. The Company recognizes such revenue when service is provided. For the six months ended June 30, 2011 and 2010, revenue from after-sales services after the expiration of the warranty period was \$140,200 and \$39,500, respectively. For the three months ended June 30, 2011 and 2010, revenue from after-sales services after the expiration of the warranty period was \$55,400 and \$22,100, respectively.

Cost of Goods Sold

Cost of goods sold consists primarily of material costs and direct labor and manufacturing overhead that are directly attributable to the products. Write-down of inventories to the lower of cost or market is also recorded in cost of goods sold.

Advance from Customers

The Company records payments received from customers in advance of their future orders to advance account. Those orders normally are delivered within a reasonable period of time based upon contract terms with the customers.

Concentration of Credit Risk

Cash includes cash on hand and demand deposits in accounts maintained within China. Balances at financial institutions within China are not covered by insurance. The Company has not experienced any losses in such accounts.

Certain other financial instruments, which subject the Company to concentration of credit risk, consist of accounts and other receivables. The Company does not require collateral or other security to support these receivables. The

Company conducts periodic reviews of its customers' financial condition and customer payment practices to minimize collection risk on accounts receivable.

The operations of the Company are located in the PRC. Accordingly, the Company's business, financial condition and results of operations may be influenced by the political, economic and legal environments in the PRC, as well as by the general state of the PRC economy.

#### Goodwill

Goodwill is the excess of purchase price and related costs over the value assigned to the net tangible and identifiable intangible assets of businesses acquired. In accordance with SFAS No. 142, Goodwill and Other Intangible Assets ("Statement No. 142"), codified in ASC Topic 350, goodwill is not amortized but is tested for impairment, annually or when circumstances indicate a possible impairment may exist. Impairment testing is performed at a reporting unit level. An impairment loss generally would be recognized when the carrying amount of the reporting unit exceeds its fair value, with the fair value of the reporting unit determined using discounted cash flow ("DCF") analysis. A number of significant assumptions and estimates are involved in the application of the DCF analysis to forecast operating cash flows, including the discount rate, the internal rate of return and projections of realizations and costs to produce. Management considers historical experience and all available information at the time the fair values of its reporting units are estimated.

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The excess of the purchase price over the fair value of the net assets acquired from GWP of \$5.3 million was recorded as goodwill. The excess of the purchase price over the fair value of the net assets acquired from Bingchuan of \$6.1 million was recorded as goodwill. As of June 30, 2011, the Company concluded there was no impairment of goodwill.

## Statement of Cash Flows

In accordance with SFAS No. 95, "Statement of Cash Flows," codified in FASB ASC Topic 230, cash flows from the Company's operations are calculated based upon the local currencies. As a result, amounts shown on the statement of cash flows may not necessarily agree with changes in the corresponding asset and liability on the balance sheet.

## Basic and Diluted Earnings (Loss) per Share (EPS)

Basic EPS is computed by dividing income available to common shareholders by the weighted average number of common shares outstanding for the period. Diluted EPS is computed similarly, except that the denominator is increased to include the number of additional common shares that would have been outstanding if the potential common shares had been issued and if the additional common shares were dilutive. Diluted EPS are based on the assumption that all dilutive convertible shares and stock options were converted or exercised. Dilution is computed by applying the treasury stock method. Under this method, options and warrants are assumed to have been exercised at the beginning of the period (or at the time of issuance, if later), and as if funds obtained thereby were used to purchase common stock at the average market price during the period.

The following table presents a reconciliation of basic and diluted earnings (loss) per share for the six months ended June 30, 2011 and 2010:

	2011	2010
Net income (loss)	\$ (10,372,178)	\$ 5,065,291
Weighted average shares outstanding - basic	38,572,381	32,800,818
Effect of dilutive securities:		
Unexercised warrants and options	-	53,240
Weighted average shares outstanding - diluted	38,572,381	32,854,058
Earnings (loss) per share - basic	\$ (0.27)	\$ 0.15
Earnings (loss) per share - diluted	\$ (0.27)	\$ 0.15

The following table presents a reconciliation of basic and diluted earnings (loss) per share for the three months ended June 30, 2011 and 2010:

	2011	2010
Net income (loss)	\$ (6,418,376)	\$ 3,362,210
Weighted average shares outstanding - basic	38,592,598	32,806,048

Effect of dilutive securities:

Unexercised warrants and options	-	26,585
Weighted average shares outstanding - diluted	38,592,598	32,832,633
Earnings (loss) per share - basic	\$ (0.17)	\$ 0.10
Earnings (loss) per share - diluted	\$ (0.17)	\$ 0.10

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Fair Value of Financial Instruments

For certain of the Company's financial instruments, including cash and equivalents, restricted cash, accounts receivable, accounts payable, accrued liabilities and short-term debt, the carrying amounts approximate their fair values due to their short maturities. ASC Topic 820, "Fair Value Measurements and Disclosures," requires disclosure of the fair value of financial instruments held by the Company. ASC Topic 825, "Financial Instruments," defines fair value, and establishes a three-level valuation hierarchy for disclosures of fair value measurement that enhances disclosure requirements for fair value measures. The carrying amounts reported in the consolidated balance sheets for receivables and current liabilities each qualify as financial instruments and are a reasonable estimate of their fair values because of the short period of time between the origination of such instruments and their expected realization and their current market rate of interest. The three levels of valuation hierarchy are defined as follows:

- § Level 1 inputs to the valuation methodology are quoted prices for identical assets or liabilities in active markets.
- § Level 2 inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- § Level 3 inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The Company analyzes all financial instruments with features of both liabilities and equity under ASC 480, "Distinguishing Liabilities from Equity," and ASC 815.

As of June 30, 2011, and December 31, 2010, the Company did not identify any assets and liabilities that are required to be presented on the balance sheet at fair value.

Foreign Currency Translation and Comprehensive Income (Loss)

The accounts of the Company's China subsidiaries are maintained in the Chinese Yuan Renminbi (RMB) and the accounts of the U.S. parent company are maintained in the U.S. Dollar (USD). The functional currency of GWP, the Company's subsidiary in Germany, is the Euro (EUR). The accounts of the China subsidiaries and German subsidiary were translated into USD in accordance with SFAS No. 52, "Foreign Currency Translation" (codified in FASB ASC Topic 830), with the RMB as the functional currency for the China subsidiaries. According to the Statement, all assets and liabilities were translated at the exchange rate on the balance sheet date, stockholders' equity are translated at the historical rates and statement of operations items are translated at the weighted average exchange rate for the year. The resulting translation adjustments are reported under other comprehensive income in accordance with SFAS No. 130, "Reporting Comprehensive Income" (codified in FASB ASC Topic 220).

Stock-Based Compensation

The Company accounts for its stock-based compensation in accordance with SFAS No. 123R, "Share-Based Payment, an Amendment of FASB Statement No. 123" (codified in FASB ASC Topics 718 and 505). The Company recognizes

in the income statement the grant date fair value of stock options and other equity-based compensation issued to employees and non-employees.

#### Segment Reporting

SFAS No. 131, “Disclosures about Segments of an Enterprise and Related Information” (codified in FASB ASC Topic 280), requires use of the “management approach” model for segment reporting. The management approach model is based on the way a company’s management organizes segments within the company for making operating decisions and assessing performance. Reportable segments are based on products and services, geography, legal structure, management structure, or any other manner in which management disaggregates a company.

SFAS No. 131 has no effect on the Company’s financial statements as substantially all of the Company’s operations are conducted in one industry segment.

#### Registration Rights Agreement

The Company accounts for payment arrangements under registration rights agreements in accordance with FASB Staff Position EITF 00-19-2 (codified in FASB ASC Topic 815), which requires the contingent obligation to make future payments or otherwise transfer consideration under a registration payment arrangement, whether issued as a separate agreement or included as a provision of a financial instrument or other agreement, be separately recognized and measured in accordance with SFAS No. 5, Accounting for Contingencies (codified in FASB ASC Topic 450).



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Under the terms of the registration rights agreement entered into between the Company and the investors in the Company's private placement offering in 2008, the Company was required to file a registration statement (the "Registration Statement") with the SEC within 60 days of the closing of the private placement and the Registration Statement must have been declared effective by the SEC within 180 days of the final closing of the private placement. Subject to certain grace periods, the Registration Statement must remain effective and available for use until the investors can sell all of the securities covered by the Registration Statement without restriction pursuant to Rule 144. If the Company fails to meet the filing or effectiveness requirements of the Registration Statement, the Company is required to pay liquidated damages of 2% of the purchase price paid by such investor for any registrable securities then held by such investor on the date of such failure and on each anniversary of the date of such failure until such failure is cured. The last closing under the private placement was on September 24, 2008, and the 180-day period for effectiveness of the Registration Statement under the registration rights agreement ended March 23, 2009. At March 31, 2009, the Company became liable to pay approximately \$110,000 in liquidated damages to the investors because the Registration Statement had not been declared effective by the SEC within 180 days of the final closing of the offering. The liquidated damages were recorded as the Company's general and administrative expense with charging corresponding account to accrued liabilities. The Registration Statement became effective on June 23, 2009, a post-effective amendment became effective on May 21, 2010, and another post-effective amendment became effective on April 20, 2011. The Company paid \$63,004 for the liquidated damages and the remaining \$46,996 was waived by investors.

Reclassifications

Certain prior year amounts were reclassified to conform to the manner of presentation in the current period.

New Accounting Pronouncements

In June 2011, FASB issued ASU 2011-05, Comprehensive Income (ASC Topic 220): Presentation of Comprehensive Income. Under the amendments in this update, an entity has the option to present the total of comprehensive income, the components of net income and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. Under both options, an entity is required to present each component of net income along with total net income, each component of other comprehensive income along with a total for other comprehensive income and a total amount for comprehensive income. In a single continuous statement, the entity is required to present the components of net income and total net income, the components of other comprehensive income and a total for other comprehensive income, along with the total of comprehensive income in that statement. In the two-statement approach, an entity is required to present components of net income and total net income in the statement of net income. The statement of other comprehensive income should immediately follow the statement of net income and include the components of other comprehensive income and a total for other comprehensive income, along with a total for comprehensive income. In addition, the entity is required to present on the face of the financial statements reclassification adjustments for items that are reclassified from other comprehensive income to net income in the statement(s) where the components of net income and the components of other comprehensive income are presented. The amendments in this update should be applied retrospectively and are effective for fiscal years, and interim periods within those years, beginning after December 15, 2011. The Company is currently assessing the effect that the adoption of this pronouncement will have on its financial statements.

3. INVENTORIES

Inventories at June 30, 2011, and December 31, 2010 were as follows:

	2011		2010
Raw materials	\$ 24,339,636	\$	15,803,040
Work in process	5,207,767		3,157,799
Finished goods	8,928,186		7,624,523
Total	\$ 38,475,589	\$	26,585,362

#### 4. NOTES RECEIVABLE – BANK ACCEPTANCES

The Company sold goods to its customers and received commercial notes (bank acceptance) from them in lieu of payments for accounts receivable. The Company discounted the commercial notes with the bank or endorsed the commercial notes to vendors for payment of their own obligations or to get cash from third parties. Most of the commercial notes have a maturity of less than six months. At June 30, 2011, and December 31, 2010, the Company had notes receivable of \$954,649 and \$1,457,457, respectively.

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## 5. PROPERTY AND EQUIPMENT, NET

Property and equipment consisted of the following at June 30, 2011, and December 31, 2010:

	2011	2010
Building	\$ 4,662,830	\$ 4,556,445
Production equipment	7,029,751	3,923,521
Office equipment	870,818	794,816
Vehicles	902,852	711,798
Total	13,466,251	9,986,580
Less: Accumulated depreciation	(2,169,295)	(1,605,561)
Net	\$ 11,296,956	\$ 8,381,019

Depreciation for the six months ended June 30, 2011 and 2010, was \$521,600 and \$399,100, respectively. Depreciation for the three months ended June 30, 2011 and 2010, was \$284,800 and \$230,200, respectively.

## 6. OTHER RECEIVABLES, PREPAYMENTS AND DEPOSITS

Other receivables, prepayments and deposits consisted of the following at June 30, 2011, and December 31, 2010, respectively:

	2011	2010
Cash advanced to third parties	\$ 1,123,989	\$ 2,076,862
Deposit for public bids of sales contracts	1,253,242	846,739
Deposit for acquisition of Bingchuan	-	1,834,600
Prepayment for freight and related insurance expenses	185,782	115,542
Other deposits	203,967	53,289
Advance to employees	487,697	600,427
Others	1,524,248	774,313
Total	\$ 4,778,925	6,301,772

Cash advanced to third parties was short-term cash advances to unrelated third parties with repayment usually within three to six months. Deposits for public bidding represented the deposits for bidding on expected contracts, which will be returned to the Company after the bidding process is completed, usually within three to four months from the payment date. Prepayment for freight and related insurance expenses represented prepaid shipping and freight insurance expenses for customers and is generally repaid upon customer receipt of products. Deposits mainly consisted of deposits for rents, payroll expense and utilities. Cash advance to employees represented short-term loans to employees and advances to employees for business trips and related expenses. Other receivables, prepayments and deposits are reimbursed or settled within 12 months.

## 7. INTANGIBLE ASSETS

Intangible assets consisted mainly of land use rights, trademark, computer software, know-how technology, customer list and covenant not to compete. All land in the PRC is government-owned and cannot be sold to any individual or company. However, the government grants the user a "land use right" to use the land. The Company acquired land use

rights during 2005 for approximately \$440,000 (RMB 3,549,682). In June 2009, the Company acquired land use rights for \$3.2 million from Siping Beifang. In November 2010, the Company's subsidiary, SmartHeat Energy, acquired land use rights for \$10.1 million. The Company has the right to use the land for 50 years and is amortizing such rights on a straight-line basis for 50 years.

Intangible assets consisted of the following at June 30, 2011, and December 31, 2010, respectively:

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	2011	2010
Land use rights	\$ 14,245,689	\$ 13,884,020
Know-how technology	858,653	275,345
Customer list	202,402	197,784
Covenant not to compete	110,106	107,593
Software	487,961	403,680
Trademark	281,263	-
Total	16,186,074	14,868,422
Less: Accumulated amortization	(921,533)	(624,688)
Net	\$ 15,264,541	\$ 14,243,734

Amortization of intangible assets for the six months ended June 30, 2011 and 2010, was \$279,300 and \$125,000, respectively. Amortization of intangible assets for the three months ended June 30, 2011 and 2010, was \$173,800 and \$65,000, respectively. Annual amortization expense for the next five years from June 30, 2011, is expected to be \$588,000, \$566,000, \$436,000, \$425,000 and \$402,000.

#### 8. CONSTRUCTION IN PROGRESS

The Company had construction in progress of \$520,149 at June 30, 2011, with two ongoing projects. SmartHeat Energy is building a factory with a total estimated cost of \$9 million, of which the Company has paid \$458,000 as of June 30, 2011, and expects this construction to be completed by June 2012. SmartHeat Siping has a construction project of \$62,000 for the laying of a foundation for its machinery installation. This foundation project will be completed in 2011, with remaining cost to complete of \$25,000.

#### 9. TAXES PAYABLE

Taxes payable consisted of the following at June 30, 2011, and December 31, 2010:

	2011	2010
Income tax payable	\$ -	\$ 1,866,569
Value-added tax payable	-	117,779
Other taxes payable	8,845	16,108
Total taxes payable	\$ 8,845	\$ 2,000,456

#### 10. ACCRUED LIABILITIES AND OTHER PAYABLES

Accrued liabilities and other payables consisted of the following at June 30, 2011, and December 31, 2010:

	2011	2010
Advance from third parties	\$ 954,497	\$ 132,890
Payable to Siping Beifang	-	1,238,166
Other payables	1,067,821	952,593
Warranty reserve	94,702	398,292
Accrued expenses	381,991	317,840
Total	\$ 2,499,011	\$ 3,039,701

Advance from third parties was short-term, non-interest-bearing advances from third parties. Other payables consisted of payables for the Company's miscellaneous expenses including postage, business insurance, employee benefits, bidding fee, etc. Accrued expenses mainly consisted of accrued purchases, interest and utility.

#### 11. NOTES PAYABLE – BANK ACCEPTANCES

Notes payable represented the conversion of accounts payable into notes payable, which were issued from the bank. The Company deposited a portion of the acceptance amount into the bank. The terms of the notes range from 3-6 months and bear no interest. At June 30, 2011, and December 31, 2010, the Company deposited \$1.7 million and \$1.4 million with the bank as restricted cash for the bank issuing the notes. The restricted cash is refundable when the notes are repaid.

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## 12. LOANS PAYABLE - BANK

The Company was obligated for the following short-term loans as of June 30, 2011, and December 31, 2010:

	2011	2010
From a commercial bank in the PRC for RMB 3,000,000 entered into on June 30, 2011. The loan currently bears interest at 6.63% with maturity on June 29, 2012. The loan was guaranteed by a third party.	\$ 463,564	\$ -
From a commercial bank in the PRC for RMB 13,000,000 entered into on August 9, 2010. The loan currently bears interest at 5.31% with maturity on June 30, 2011. The Company pledged its building and land use rights for this loan. The loan was paid in full when it matured.	-	1,962,946
From a commercial bank in the PRC for RMB 5,000,000 entered into on October 19, 2010. The loan currently bears interest at 5.84% with maturity on October 18, 2011. The loan was pledged by bank deposit.	772,606	754,979
From a commercial bank in the PRC for RMB 17,000,000 entered into on June 1, 2010. The loan currently bears interest at 5.31% with maturity on June 30, 2011. The loan was guaranteed by a third party. The loan was paid in full when it matured.	-	2,566,929
From a commercial bank in the PRC for RMB 25,000,000 entered into on October 18, 2010. The loan currently bears interest at 5.84% with maturity on October 17, 2011. The loan was pledged by bank deposit.	3,863,032	3,774,895
From a commercial bank in the PRC for RMB 50,000,000 entered into on June 29, 2011. The loan currently bears interest at 6.94% with maturity on January 27, 2012. The loan was guaranteed by SanDeKe.	7,726,065	-
From a commercial bank in the PRC for RMB 10,000,000 entered into on June 27, 2011. The loan currently bears interest at 7.57% with maturity on June 27, 2012. The loan was pledged by bank deposit.	1,545,213	-
From a commercial bank in the PRC for RMB 3,200,000 entered into on March 15, 2011. The loan currently bears interest at 6.72% with maturity on July 14, 2011. The Company pledged saving deposit for this loan.	494,468	-
From a commercial bank in the PRC for RMB 1,040,000 entered into on April 29, 2011. The loan currently bears interest at 7.02% with maturity on August 26, 2011. The Company pledged saving deposit for this loan.	160,702	-
From a commercial bank in the PRC for RMB 3,500,000 entered into on June 2, 2011. The loan currently bears interest at 7.02% with maturity on September 29, 2011. The Company pledged saving deposit for this loan.	540,825	-
	\$ 15,566,475	\$ 9,059,749

## 13. DEFERRED TAX ASSET (LIABILITY)

Deferred tax asset (liability) represented differences between the tax bases and book bases of property and equipment and intangible assets arising from the acquisition of SanDeKe, GWP and Bingchuan, and bad debt allowance booked by the Company which was not allowed per tax purpose. As of June 30, 2011, deferred tax assets mainly resulted from allowance for bad debts and deferred tax liability related to the acquisition of Bingchuan.

#### 14. INCOME TAXES

The Company is subject to income taxes by entity on income arising in or derived from the tax jurisdiction in which each entity is domiciled.

SmartHeat, the parent company, was incorporated in the U.S. and has net operating losses (NOL) for income tax purposes. SmartHeat has net operating loss carry forwards for income taxes of approximately \$2.65 million at June 30, 2011, which may be available to reduce future years' taxable income; NOL can be carried forward up to 20 years from the year the loss is incurred. Management believes the realization of benefits from these losses remains uncertain due to SmartHeat's limited operating history and continuing losses. Accordingly, a 100% deferred tax asset valuation allowance has been provided.



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Taiyu and SanDeKe are governed by the Income Tax Law of the PRC concerning privately-run enterprises, which are generally subject to tax at a statutory rate of 25% on income reported in the statutory financial statements after appropriated tax adjustments.

According to the new income tax law that became effective January 1, 2008, new high-tech enterprises given special support by the PRC government are subject to an income tax rate of 15%. Taiyu was recognized as a new high-tech enterprise and, having registered its status with the tax bureau, therefore enjoyed the income tax rate of 15% from 2009 through 2010. Taiyu currently is in the process of renewing its high-tech enterprise status.

SanDeKe is exempt from income tax for two years starting from its first profitable year and is entitled to a 50% discount on the income tax rate from 2010 through 2012. The income tax rate for SanDeKe is 12% and 11% for 2011 and 2010, respectively.

SmartHeat Siping, Jinhui, SmartHeat Investment, SmartHeat Energy, Bingchuan, Ruicheng and SmartHeat Trading are subject to the regular 25% income tax rate. GWP is subject to a 15% corporate income tax in Germany.

The following table reconciles the U.S. statutory rates to the Company's effective tax (benefit) rate for the six months ended June 30, 2011 and 2010:

	2011	2010
U.S. statutory rates	(34.0)%	34.0%
Tax rate difference	8.4%	(9.9)%
Effect of tax holiday	7.4%	(11.6)%
Others	(0.2)%	0.3%
Valuation allowance	7.2%	3.1%
Tax (benefit) per financial statements	(11.2)%	15.9%

The following table reconciles the U.S. statutory rates to the Company's effective tax (benefit) rate for the three months ended June 30, 2011 and 2010:

	2011	2010
U.S. statutory rates	(34.0)%	34.0%
Tax rate difference	8.4%	(9.6)%
Effect of tax holiday	7.5%	(10.4)%
Others	(1.2)%	(0.0)%
Valuation allowance	10.2%	3.1%
Tax (benefit) per financial statements	(9.1)%	17.1%

The provision for income tax (benefit) for the six months ended June 30, 2011 and 2010, consisted of the following:

	2011	2010
Income tax expense - current	\$ (31,589)	\$ 981,338
Income tax benefit - deferred	(1,296,470)	(15,032)
Total income tax expense (benefit)	\$ (1,328,059)	\$ 966,306

The provision for income tax (benefit) for the three months ended June 30, 2011 and 2010, consisted of the following:

	2011	2010
Income tax expense - current	\$ (100,263)	\$ 704,234
Income tax benefit - deferred	(546,897)	(7,448)
Total income tax expense (benefit)	\$ (647,160)	\$ 696,786

#### 15. STATUTORY RESERVES

Pursuant to the corporate law of the PRC effective January 1, 2006, the Company is now only required to maintain one statutory reserve by appropriating from its after-tax profit before declaration or payment of dividends. The statutory reserve represents restricted retained earnings.

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**Surplus Reserve Fund**

The Company is now only required to transfer 10% of its net income, as determined under PRC accounting rules and regulations, to a statutory surplus reserve fund until such reserve balance reaches 50% of the Company's registered capital.

The surplus reserve fund is non-distributable other than during liquidation and can be used to fund previous years' losses, if any, and may be utilized for business expansion or converted into share capital by issuing new shares to existing shareholders in proportion to their shareholding or by increasing the par value of the shares currently held by them, provided that the remaining reserve balance after such issue is not less than 25% of the registered capital.

**Common Welfare Fund**

The common welfare fund is a voluntary fund that provides that the Company can elect to transfer 5% to 10% of its net income to this fund. This fund can only be utilized on capital items for the collective benefit of the Company's employees, such as construction of dormitories, cafeteria facilities and other staff welfare facilities. This fund is non-distributable other than upon liquidation. As of June 30, 2011, and December 31, 2010, the Company has not made any reserve under the common welfare fund.

**16. STOCKHOLDERS' EQUITY****Common Stock with Warrants Issued for Cash**

In August 2008, the Company sold 1,630,000 units consisting of one share of the Company's common stock and a 3-year warrant to purchase 15% of one share of the Company's common stock for \$6.00 per share, at \$3.50 per unit, for approximately \$5.7 million. The Company issued warrants to purchase 244,500 shares of its common stock. In connection with the private placement, the Company paid commissions of \$340,000 and issued warrants to purchase 148,500 shares of its common stock to placement agents. The warrants are immediately exercisable and expire on the third anniversary of their issuance. The warrants require the Company to settle in its own shares. There is no provision for cash settlement, except in lieu of fractional shares. Net proceeds of approximately \$5.1 million were received by the Company. The value of warrants was determined by using the Black-Scholes pricing model with the following assumptions: discount rate – 2.76%; dividend yield – 0%; expected volatility – 15% and term of 3 years. The value of the warrants was \$70,246. During 2009, warrants to purchase 281,975 shares were exercised at \$6.00 per share for \$1,691,850. During 2010, warrants to purchase 14,250 shares were exercised at \$6.00 per share for \$85,500.

Following is a summary of the warrant activity:

	Number of Shares	Average Exercise Price per Share	Weighted Average Remaining Contractual Term in Years
Outstanding at December 31, 2010	96,775	\$ 6.00	0.51
Exercisable at December 31, 2010	96,775	\$ 6.00	0.51

Granted	-	-	-
Exercised	-	-	-
Forfeited	-	-	-
Outstanding at June 30, 2011	96,775	\$ 6.00	0.01
Exercisable at June 30, 2011	96,775	\$ 6.00	0.01

#### Stock Options to Independent Directors and Employee

On July 17, 2008, the Company granted non-statutory stock options to each of its two independent U.S. directors. The terms of each option are: 10,000 shares at an exercise price per share of \$4.60, with a life of five years and vesting over three years as follows: 3,333 shares vested July 17, 2009; 3,333 shares vested July 17, 2010; and 3,334 shares vest on July 17, 2011, subject in each case to the director continuing to be associated with the Company as a director. The options were valued using a volatility of 15%, risk-free interest rate of 2.76%, and dividend yield of 0%. No estimate of forfeitures was made as the Company has a short history of granting options.

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On July 31, 2009, one of the Company's independent U.S. directors voluntarily retired. As such, he forfeited his right to his unvested options to purchase 6,667 shares.

On February 1, 2010, the Company issued stock options to an employee. The terms of the options are: 50,000 shares at an exercise price per share of \$11.85, with a life of five years and vesting over two years as follows: 25,000 shares vest on June 30, 2011; 25,000 shares vest on June 29, 2012. The options were valued using a volatility of 74%, risk free interest rate of 2.76%, and dividend yield of 0%. The grant-date fair value of the options was \$367,107.

Based on the fair value method under SFAS No. 123 (Revised) "Share Based Payment" ("SFAS 123(R)") (codified in FASB ASC Financial Instruments, Topic 718 & 505), the fair value of each stock option granted is estimated on the date of the grant using the Black-Scholes option pricing model. The Black-Scholes option pricing model has assumptions for risk-free interest rates, dividends, stock volatility and expected life of an option grant. The risk-free interest rate is based upon market yields for United States Treasury debt securities at a maturity near the term remaining on the option. Dividend rates are based on the Company's dividend history. The stock volatility factor is based on the historical volatility of the Company's stock price. The expected life of an option grant is based on management's estimate. The fair value of each option grant to independent directors is calculated by the Black-Scholes method and is recognized as compensation expense over the vesting period of each stock option award.

Following is a summary of the option activity:

	Number of Shares	Average Exercise Price per Share	Weighted Average Remaining Contractual Term in Years
Outstanding at December 31, 2010	63,333	\$ 10.32	3.76
Exercisable at December 31, 2010	10,000	\$ 4.60	2.54
Granted	-	-	-
Exercised	-	-	-
Forfeited	-	-	-
Outstanding at June 30, 2011	63,333	\$ 10.32	3.26
Exercisable at June 30, 2011	35,000	\$ 4.60	3.15

There were no options exercised during the six months ended June 30, 2011 and 2010. The Company recorded \$102,731 and \$54,974 as compensation expense for stock options during the six months ended June 30, 2011 and 2010, respectively. There were no options exercised during the three months ended June 30, 2011 and 2010. The Company recorded \$51,646 and \$54,222 as compensation expense for stock options during the three months ended June 30, 2011 and 2010, respectively.

On April 18, 2011, the Company issued 50,000 shares of stock to an employee as bonus. The Company recorded \$150,500 as stock compensation expenses during the three months ended June 30, 2011.

Stock Issued for Consulting Service

On January 1, 2010, the Company entered into a one-year service agreement with a consultant to provide business development assistance and engineering advice regarding the sales and marketing of the Company's products. On July 16, 2010, the Company and consultant amended the compensation terms under the consulting agreement. The Company compensated the consultant on a quarterly basis at \$6,250 and 500 restricted shares of the Company's common stock in 2010. Starting from 2011, the Company will compensate the consultant on a quarterly basis at \$6,250 only.

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17. COMMITMENTS

Employment Agreements

On January 1, 2008, Taiyu entered into a 3-year employment agreement with Jun Wang, the Company's Chief Executive Officer, which agreement was renewed on the same terms through December 31, 2013, upon mutual agreement between Mr. Wang and Taiyu. Pursuant to the terms of his employment agreement, Mr. Wang shall receive a salary not less than the lowest minimum wage per month paid in Shenyang and shall be based on the uniform wage and incentive system in Shenyang. Effective on February 1, 2010, the Compensation Committee approved an increase in Mr. Wang's annual compensation to a base salary of \$150,000 per year.

On January 1, 2008, Taiyu entered into a 3-year employment agreement with Zhijuan Guo, the Company's Chief Financial Officer, which agreement was renewed on the same terms through December 31, 2013, upon mutual agreement between Ms. Guo and Taiyu. Pursuant to the terms of her employment agreement, Ms. Guo shall receive a salary not less than the lowest minimum wage per month paid in Shenyang and shall be based on the uniform wage and incentive system in Shenyang. In addition, Ms. Guo shall be entitled to overtime pay in accordance with the applicable law.

On February 1, 2010, SmartHeat entered into an employment agreement with Xudong Wang, the Company's Vice President of Strategy and Development, for a term ending on June 30, 2013. Mr. Wang is compensated at RMB 70,000 (\$10,648) per month and eligible for annual cash bonuses at the sole discretion of the Board of Directors.

Lease Agreements

The Company leased offices for its sales representative in several different cities under various one-year, non-cancellable and renewable operating lease agreements. Rental expense for the six months ended June 30, 2011 and 2010, was approximately \$252,350 and \$71,000, respectively. Rental expense for the three months ended June 30, 2011 and 2010, was approximately \$186,550 and \$54,000, respectively.

Capital Contribution

On April 7, 2010, the Company formed SmartHeat Investment, a wholly owned subsidiary in Shenyang, with registered capital of \$70 million. As of June 30, 2011, the Company has contributed \$30 million in capital, and was committed to contribute an additional \$40 million within five years, which is permitted per PRC regulations.

18. CONTINGENCIES

The Company's operations in the PRC are subject to specific considerations and significant risks not typically associated with companies in North America and Western Europe. These include risks associated with, among others, the political, economic and legal environments and foreign currency exchange. The Company's results may be adversely affected by changes in governmental policies with respect to laws and regulations, anti-inflationary measures, currency conversion and remittance abroad and rates and methods of taxation, among other things.

The Company's sales, purchases and expense transactions in China are denominated in RMB and all of the Company's assets and liabilities in China are also denominated in RMB. The RMB is not freely convertible into foreign currencies

under the current law. In China, foreign exchange transactions are required by law to be transacted only by authorized financial institutions. Remittances in currencies other than RMB may require certain supporting documentation in order to affect the remittance.

#### 19. ACQUISITION AND UNAUDITED PRO FORMA INFORMATION

On March 3, 2011, the Company completed the acquisition of GWP, a designer and manufacturer of high efficiency heat pumps. This acquisition will extend the Company's clean technology heating solutions into the rapidly growing heat pump markets in Europe and China, enabling its customers to purchase technologically advanced heat pumps at competitive prices. The total purchase price was EUR 4,248,082 (\$5,898,887) and was paid at closing.

The following table summarizes the preliminary fair values of the assets acquired and liabilities assumed at the date of acquisition. The fair values of the assets acquired and liabilities assumed at agreement date were used for the purpose of purchase price allocation. The excess of the purchase price over the fair value of the net assets acquired of \$5,134,627 was recorded as goodwill.



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Cash	\$ 239,686
Accounts receivable	137,185
Other receivables	24,254
Inventory	667,412
Property and equipment	350,382
Goodwill	5,134,627
Accounts payable	(536,907)
Other payables	(117,752)
Purchase price	\$ 5,898,887

On March 1, 2011, the Company entered into a purchase agreement with Bingchuan, a Shenyang-based state-owned heat pump manufacturer and designer. The Company paid RMB 50 million (\$7.6 million) to acquire 95% of the equity interests in Bingchuan, with the local government retaining the remaining 5% equity interest.

The following table summarizes the preliminary fair values of the assets acquired and liabilities assumed at the date of the Bingchuan acquisition. The fair values of the assets acquired and liabilities assumed at the agreement date were used for the purpose of purchase price allocation. The excess of the purchase price over the fair value of the net assets acquired of \$5,629,951 was recorded as goodwill.

Cash	\$ 189,438
Accounts receivable	920,463
Other receivable	263,220
Inventory	1,265,455
Property and equipment	759,341
Intangible assets	858,409
Goodwill	5,629,951
Accounts payable	(446,334)
Other payable and accrued expenses	(686,195)
Short-term loan	(760,433)
Deferred tax liability	(285,069)
Noncontrolling interest	(103,915)
Purchase price	\$ 7,604,331

The following unaudited pro forma consolidated results of operations for SmartHeat for the six months ended June 30, 2011 and 2010, presents the operations of SmartHeat, GWP and Bingchuan as if the acquisitions occurred at January 1, 2011 and 2010, respectively. The pro forma results are not necessarily indicative of the actual results that would have occurred had the acquisitions been completed as of the beginning of the periods presented, nor are they necessarily indicative of future consolidated results.

	2011
Net revenue	\$ 15,367,545
Cost of revenue	10,070,434
Gross profit	5,297,111
Total operating expenses	17,326,423

Loss from operations	(12,029,312)
Total non-operating expenses	(243,961)
Loss before income tax	(12,273,273)
Income tax	(1,328,051)
Loss after income tax	(10,945,222)
Noncontrolling interest	145,110
Loss to SmartHeat Inc.	\$ (10,800,112)
Weighted average shares outstanding	38,572,381
Loss per share	\$ (0.28)

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## SMARTHEAT INC. AND SUBSIDIARIES

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	2010
Net revenue	\$ 51,255,183
Cost of revenue	36,065,259
Gross profit	15,189,924
Total operating expenses	11,473,852
Income from operations	26,663,776
Total non-operating income	3,326,736
Income before income tax	29,990,512
Income tax	(966,306)
Income after income tax	29,024,206
Noncontrolling interest	(6,666)
Income to SmartHeat Inc.	\$ 29,017,540
Weighted average shares outstanding	32,800,818
Earnings per share	\$ 0.88

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CAUTIONARY STATEMENT FOR FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). We have based these forward-looking statements on our current expectations and projections about future events. These forward-looking statements are subject to known and unknown risks, uncertainties and assumptions about us that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by such forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "could," "would," "expect," "plan," "anticipate," "believe," "estimate," "contingent upon," "could be," "may be," or "will be," or the negative of such terms or other similar expressions. Factors that might cause or contribute to such a discrepancy include, but are not limited to, those listed under the heading "Risk Factors" and those listed in our other Securities and Exchange Commission filings. The following discussion should be read in conjunction with our Financial Statements and related Notes thereto included elsewhere in this report. Throughout this Quarterly Report, we will refer to SmartHeat Inc. as "SmartHeat," the "Company," "we," "us," and "our."

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview

We are a designer, manufacturer and seller of clean technology plate heat exchangers and related systems in the People's Republic of China ("China" or the "PRC"). Our products are used by our customers in the industrial, residential and commercial markets in China to improve energy utilization and efficiencies and reduce pollution by reducing the need for coal fired boilers. We design, manufacture, sell and service plate heat exchangers ("PHEs"), PHE Units, which combine PHEs with various pumps, temperature sensors, valves and automated control systems, heat meters and heat pumps for use in commercial and residential buildings. We also design, manufacture and sell spiral heat exchangers and tube heat exchangers. Our products and systems are an increasingly important element in providing a clean technology, mission-critical solution to energy consumption and air pollution problems in China and are commonly used in a wide variety of industrial processes where heat transfer is required. Common applications include energy conversion for heating, ventilation and air conditioning ("HVAC") and industrial use in petroleum refining, petrochemicals, metallurgy, food and beverage and chemical processing. Our PHE Units are custom designed by our own in-house engineers and sold under our Taiyu brand name, while our PHEs are sold under both our Taiyu brand as well as the Sondex brand name. We are an authorized dealer of Sondex PHEs in China.

We were incorporated in the State of Nevada on August 4, 2006, under the name Pacific Goldrim Resources, Inc., as an exploration stage corporation that intended to engage in exploration for silver, lead and zinc. On April 14, 2008, we changed our name to SmartHeat Inc. and acquired all of the equity interests in Shenyang Taiyu Machinery & Electronic Equipment Co., Ltd. ("Taiyu"), a privately held company formed under the laws of the PRC engaged in the design, manufacture, sale and servicing of PHE products in China. After the relevant PRC government agency approved our subscription of 71.6% of the registered capital increase of Taiyu on July 29, 2008, PRC approval of Taiyu becoming a wholly owned subsidiary of SmartHeat was obtained on June 3, 2009, when the transfer by the three original owners of Taiyu of their remaining 28.4% ownership of Taiyu to SmartHeat was officially recognized.

As an expansion of our business, we acquired SanDeKe Co., Ltd. ("SanDeKe"), a Shanghai-based manufacturer of PHEs, on September 25, 2008. On June 16, 2009, we completed an asset purchase transaction with Siping Beifang Heat Exchanger Manufacture Co., Ltd. ("Siping Beifang") to set up a new manufacturing facility under our newly incorporated subsidiary, SmartHeat Siping Beifang Energy Technology Co., Ltd. ("SmartHeat Siping"). On August 14, 2009, we formed Beijing SmartHeat Jinhui Energy Technology Co., Ltd. ("Jinhui"), a joint venture in Beijing of which

we own 52% with total registered capital of RMB 10 million (\$1.46 million), to provide consulting services and expand our sales of PHEs into new industries and regions of China. On April 7, 2010, we formed SmartHeat (China) Investment Co., Ltd. (“SmartHeat Investment”), an investment holding company and wholly owned subsidiary in Shenyang with registered capital of \$70 million. On April 12, 2010, SmartHeat Investment formed a wholly owned subsidiary in Shenyang named SmartHeat (Shenyang) Energy Equipment Co., Ltd. (“SmartHeat Energy”) with registered capital of \$30 million for the research, development, manufacturing and sales of energy products. On May 6, 2010, we formed SmartHeat (Shanghai) Trading Co., Ltd. (“SmartHeat Trading”) to market and expand sales of our Taiyu-branded products. In January 2011, we invested \$771,658 for 51% of the equity interest in a newly formed joint venture, Hohhot Ruicheng Technology Co., Ltd. (“Ruicheng”), in Hohhot City, China for the design and manufacture of heat meters. On March 3, 2011, we completed the acquisition of Gustrower Warmepumpen GmbH (“GWP”), a designer and manufacturer of high efficiency heat pumps in Germany. This acquisition will extend our clean technology heating solutions into the rapidly growing heat pump markets in Europe and China, enabling our customers to purchase technologically advanced heat pump technology at competitive prices. The total purchase price was EUR 4,248,082 (\$5,898,887) and was paid at closing. On March 1, 2011, we entered into a purchase agreement with Shenyang Bingchuan Refrigerating Machine Limited Company (“Bingchuan”), a Shenyang-based state-owned heat pump manufacturer and designer. We paid RMB 50 million (\$7.6 million) to acquire 95% of the equity interest in Bingchuan; the local government will retain the remaining 5% equity interest.

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Our revenue is subject to fluctuations due to the timing of sales of high-value products, the impact of seasonal spending patterns, the timing and size of projects our customers perform, changes in overall spending levels in the industry, changes in PRC government fiscal policies, inflation in China and other unpredictable factors that may affect customer ordering patterns. Our revenues may fluctuate significantly due to the seasonal nature of central heating services in the PRC because the equipment used in residential buildings must be delivered and installed prior to the beginning of the heating season in late fall. Additionally, any significant delays in the commercial launch or any lack or delay of commercial acceptance of new products, unfavorable sales trends in existing product lines, or impacts from the other factors mentioned above, could adversely affect our revenue growth or cause a sequential decline in quarterly revenue. We have not been adversely affected by these trends or weaker demand from steel processing, petrochemical and HVAC industries.

### Significant Accounting Policies

While our significant accounting policies are more fully described in Note 2 to our consolidated financial statements, we believe the following accounting policies are the most critical to aid you in fully understanding and evaluating this management discussion and analysis.

### Basis of Presentation

Our financial statements are prepared in accordance with generally accepted accounting principles in the U.S. (“U.S. GAAP”).

### Principle of Consolidation

The accompanying consolidated financial statements include the accounts of SmartHeat’s U.S. parent, Taiyu, SanDeKe, SmartHeat Siping, Jinhui, SmartHeat Investment, SmartHeat Energy, SmartHeat Trading, Ruicheng, GWP and Bingchuan. The “Company” refers collectively to SmartHeat’s U.S. parent, Taiyu, SanDeKe, SmartHeat Siping, Jinhui, SmartHeat Investment, SmartHeat Energy, SmartHeat Trading, Ruicheng, GWP and Bingchuan. All significant inter-company accounts and transactions were eliminated in consolidation.

### Use of Estimates

In preparing the financial statements in conformity with U.S. GAAP, management makes estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the dates of the financial statements, as well as the reported amounts of revenues and expenses during the reporting period. Significant estimates, required by management, include the recoverability of long-lived assets, allowance for doubtful accounts, and the reserve for obsolete and slow-moving inventories. Actual results could differ from those estimates.

### Accounts Receivable

Our policy is to maintain reserves for potential credit losses on accounts receivable. Management reviews the composition of accounts receivable and analyzes historical bad debts, customer concentrations, customer credit worthiness, current economic trends and changes in customer payment patterns to evaluate the adequacy of these reserves. Accounts receivable are net of unearned interest. Unearned interest represents imputed interest on accounts receivable with due dates over one year from the invoice date discounted at our borrowing rate for the year.

### Inventories

Inventories are valued at the lower of cost or market with cost determined on a moving weighted average basis. Cost of work in progress and finished goods comprises direct material, direct labor and an allocated portion of production overheads.

#### Property and Equipment

Property and equipment are stated at cost, net of accumulated depreciation. Expenditures for maintenance and repairs are expensed as incurred; additions, renewals and betterments are capitalized. When property and equipment are retired or otherwise disposed of, the related cost and accumulated depreciation are removed from the respective accounts and any gain or loss is included in operations. Depreciation of property and equipment is provided using the straight-line method with a 10% salvage value and estimated lives as follows:

Building	20 years
Vehicles	5 years
Office Equipment	5 years
Production Equipment	5 - 10 years

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### Revenue Recognition

Our revenue recognition policies are in compliance with SEC Staff Accounting Bulletin (“SAB”) 104 (codified in Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic 605). Sales revenue is recognized when PHEs and heat meters are delivered, and for PHE Units when customer acceptance occurs, the price is fixed or determinable, no other significant obligations of ours exist and collectibility is reasonably assured. Payments received before all of the relevant criteria for revenue recognition are recorded as unearned revenue.

Our agreements with our customers generally provide that 30% of the purchase price is due upon placement of an order, 30% upon delivery and 30% upon installation and acceptance of the equipment after customer testing. As a common practice in the heating manufacturing business in China, payment of the final 10% of the purchase price is due no later than the termination date of the standard warranty period, which ranges from 3 to 24 months from the acceptance date.

Our standard warranty is provided to all customers and is not considered an additional service; rather, it is an integral part of the product sale. We believe the existence of the standard product warranty in a sales contract does not constitute a deliverable in the arrangement and thus there is no need to apply the EITF 00-21 (codified in FASB ASC Topic 605-25) separation and allocation model for a multiple deliverable arrangement. SFAS 5 (codified in FASB ASC Topic 450) specifically addresses the accounting for standard warranties and neither SAB 104 nor EITF 00-21 supersedes SFAS 5. We believe accounting for our standard warranty pursuant to SFAS 5 does not impact revenue recognition because the cost of honoring the warranty can be reliably estimated.

We charge for after-sales services provided after the expiration of the warranty period, with after-sales services mainly consisting of cleaning PHEs and repairing and exchanging parts. We recognize such revenue when service is provided. The revenue earned from these services was not material.

### Foreign Currency Translation and Comprehensive Income (Loss)

The functional currency of our subsidiaries in China is the Chinese Yuan Renminbi (“RMB”). The functional currency of GWP, our German subsidiary, is the Euro (“EUR”). For financial reporting purposes, RMB and EUR were translated into United States dollars (“USD”) as the reporting currency. Assets and liabilities are translated at the exchange rate in effect at the balance sheet date. Revenues and expenses are translated at the average rate of exchange prevailing during the reporting period. Translation adjustments arising from the use of different exchange rates from period to period are included as a component of stockholders’ equity as “Accumulated other comprehensive income.” Gains and losses resulting from foreign currency transactions are included in income. There has been no significant fluctuation in exchange rate for the conversion of RMB to USD after the balance sheet date.

We use Statement of Financial Accounting Standards (“SFAS”) No. 130, “Reporting Comprehensive Income” (codified in FASB ASC Topic 220). Comprehensive income is comprised of net income and all changes to the statements of stockholders’ equity, except those due to investments by shareholders, changes in paid-in capital and distributions to shareholders.

### Recent Accounting Pronouncements

In June 2011, FASB issued ASU 2011-05, Comprehensive Income (ASC Topic 220): Presentation of Comprehensive Income. Under the amendments in this update, an entity has the option to present the total of comprehensive income, the components of net income and the components of other comprehensive income either in a single continuous



statement of comprehensive income or in two separate but consecutive statements. Under both options, an entity is required to present each component of net income along with total net income, each component of other comprehensive income along with a total for other comprehensive income and a total amount for comprehensive income. In a single continuous statement, the entity is required to present the components of net income and total net income, the components of other comprehensive income and a total for other comprehensive income, along with the total of comprehensive income in that statement. In the two-statement approach, an entity is required to present components of net income and total net income in the statement of net income. The statement of other comprehensive income should immediately follow the statement of net income and include the components of other comprehensive income and a total for other comprehensive income, along with a total for comprehensive income. In addition, the entity is required to present on the face of the financial statements reclassification adjustments for items that are reclassified from other comprehensive income to net income in the statement(s) where the components of net income and the components of other comprehensive income are presented. The amendments in this update should be applied retrospectively and are effective for fiscal years, and interim periods within those years, beginning after December 15, 2011. We are currently assessing the effect that the adoption of this pronouncement will have on our financial statements.

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## Results of Operations

Six Months Ended June 30, 2011, Compared to the Six Months Ended June 30, 2010

The following table sets forth the results of our operations for the years indicated as a percentage of net sales:

	2011		2010	
	\$	% of Sales	\$	% of Sales
Sales	\$ 14,970,050		\$ 32,136,429	
Cost of sales	9,762,240	65.2%	21,116,060	65.7%
Gross profit	5,207,810	34.8%	11,020,369	34.3%
Operating expenses	16,826,771	112.4%	5,198,363	16.2%
Income (loss) from operations	(11,618,961)	(77.6)%	5,822,006	18.1%
Other income (expenses), net	(216,000)	(1.4)%	224,321	0.7%
Income tax expense (benefit)	(1,328,059)	(8.9)%	966,306	3.0%
Noncontrolling interest	(134,724)	(0.8)%	14,730	0%
Net income (loss) to the Company	\$ (10,372,178)	(69.3)%	\$ 5,065,291	15.8%

Sales. Net sales in the six months ended June 30, 2011, were \$14.97 million, consisting of \$4.43 million for PHE Units, \$7.29 million for PHEs, \$1.28 million for heat meters and others of \$1.97 million, while our net sales in the same period of 2010 were \$32.14 million, consisting of \$13.83 million for PHE Units, \$17.21 million for PHEs and \$1.10 million for heat meters, an overall decrease of \$17.17 million or 53%. The decrease in sales was primarily due to tightened fiscal policy in China, which has contributed to a general slowdown in many sectors of the Chinese economy and caused a decrease in sales of our PHE Units and PHEs. Most of our customers are state-owned enterprises that encountered difficulties in obtaining grants from the PRC government and faced an extended bank loan application process, both of which typically are used to finance the purchase of our products, which resulted in an unexpected cancelation of orders and delays in the performance of PHE Unit and PHE contracts. Although these events caused a decrease in sales, we expect that a portion of the canceled PHE Unit and PHE orders will be reinstated and contracts that have been partially delayed will be performed within this fiscal year or 2012, reducing the impact of the drop in sales over the long term. We are taking steps to increase the sales of our PHE Units and PHEs by continuing our expansion into regional areas of China and are encouraged by our progress in establishing sales channels in North and South America, which we expect will meaningfully contribute to revenue in 2012.

Heat meter sales increased from the same period in 2010. Article 38 of China's Energy Conservation Law issued in 2008 requires new apartments and retrofitted apartments to install heat meters; however, the implementation of this government-mandated process varies across regions and takes time, which may cause our heat meter growth rate to fluctuate. Nevertheless, we expect heat meter sales will experience significant growth in the following 2-3 years and believe we will benefit from this growth as we are one of the top heat meter manufacturers in China. We also have been expanding continuously into more regional heat-supply markets as a result of the PRC government's economic stimulus plan that stresses increased domestic infrastructure construction and continuous research and development on new products.

We have a strict review process for approving each sales contract, especially with respect to the determination of a sales price. The sales price is determined under each contract in proportion to our estimated cost in order to ensure our gross profit. Our sales price varies according to each sale depending mainly on each customer's specific requirements and our negotiation of the contract amount and term.

Cost of Sales. Cost of sales for the six months ended June 30, 2011, was \$9.76 million, while our cost of sales for the same period of 2010 was \$21.12 million, a decrease of \$11.35 million or 54%. Cost of sales mainly consisted of the

cost of materials and labor, as well as factory overhead. Materials cost is normally 80% of total cost, while factory overhead cost is about 15% and labor cost is about 5%. The decrease in cost of sales is attributable to the decrease in production and sales volume in the six months ended June 30, 2011. Cost of sales as a percentage of sales was 65.2% for the six months ended June 30, 2011, and 65.7% for the same period of 2010. The slight decrease in cost of sales as a percentage of sales was due to our effective control over inventory and raw material purchasing. We believe our cost of sales will remain stable as a result of stronger sales in new product areas, our research and development capability, our current pricing strategy and the continued improvement in the efficiency of our manufacturing facilities.

Gross Profit. Gross profit was \$5.21 million for the six months ended June 30, 2011, compared to \$11.02 million in the same period of 2010, or gross profit margins of 34.8% and 34.3%, respectively. The slight increase in our gross profit margin was due to the slight decrease in our production costs.

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**Operating Expenses.** Operating expenses consisting of selling, general and administrative expenses totaled \$16.83 million for the six months ended June 30, 2011, compared to \$5.20 million for the same period of 2010, an increase of \$11.63 million or 224%. Operating expenses as a percentage of sales were 112.4% in the six months ended June 30, 2011, compared to 16.2% in the same period of 2010. The increase in operating expenses mainly resulted from increased bad debt allowance of approximately \$5.75 million and expansion of our business, which included additional costs of hiring more sales personnel, higher depreciation expense, training our marketing team and establishing new sales offices in more regions of China. Due to the stringent fiscal policy of the Chinese government, some of our state-owned customers encountered difficulties in obtaining grants from the government and loans from state-owned banks, both of which typically are used to finance the purchase of our products, which resulted in unexpected delays in paying our accounts receivable in a timely manner. As a result of these delays, we recorded \$5.81 million bad debt allowance in the six months ended June 30, 2011. We do not expect a significant risk with respect to the overdue accounts receivable for which we took the bad debt allowance and believe that a substantial portion of the bad debt will be repaid as the Chinese government restores grants and credit policies. We believe the government's stringent fiscal policy impacting our customers will be temporary and the expansion and training of our marketing team and other employees to date will increase sales and improve the efficiency of our operations. Nevertheless, we will institute a rigorous program of cost cutting to continue to tightly control our budget and implement additional cost control measures, including a review of the staffing levels of our employees in response to the decrease in revenue.

**Net Income (Loss).** Our net loss for the six months ended June 30, 2011, was \$10.37 million compared to net income of \$5.09 million for the same period of 2010, a decrease of \$15.47 million or 304%. Net loss as a percentage of sales was 69.3% in the six months ended June 30, 2011, and net income as a percentage of sales was 15.9% in the 2010 period. This decrease in net income was attributable to the temporary decrease of net sales and increased bad debt allowance reserve.

### Three Months Ended June 30, 2011, Compared to the Three Months Ended June 30, 2010

The following table sets forth the results of our operations for the years indicated as a percentage of net sales:

	2011		2010	
	\$	% of Sales	\$	% of Sales
Sales	\$ 7,077,901		\$ 22,767,593	
Cost of sales	4,432,011	62.6%	14,986,259	65.8%
Gross profit	2,645,890	37.4%	7,781,334	34.2%
Operating expenses	9,750,316	137.8%	3,776,444	16.6%
Income (loss) from operations	(7,104,426)	(100.4)%	4,004,890	17.6%
Other income (expenses), net	(48,340)	(0.7)%	68,354	0.3%
Income tax expense (benefit)	(647,160)	(9.1)%	696,786	3.1%
Noncontrolling interest	(87,230)	(1.2)%	14,248	0.1%
Net income (loss)	\$ (6,418,376)	(90.7)%	\$ 3,362,210	14.7%

**Sales.** Net sales in the three months ended June 30, 2011, were \$7.08 million, consisting of \$3.98 million for PHE Units, \$1.27 million for PHEs, \$0.36 million for heat meters and others of \$1.47 million, while our net sales in the same period of 2010 were \$22.76 million, consisting of \$9.51 million for PHE Units, \$12.72 million for PHEs and \$0.53 million for heat meters, an overall decrease of \$15.69 million or 69%. The decrease in sales was primarily due to tightened fiscal policy in China, which has contributed to a general slowdown in many sectors of the Chinese economy and caused a decrease in sales of our PHE Units and PHEs. Most of our customers are state-owned enterprises that encountered difficulties in obtaining grants from the PRC government and faced an extended bank

loan application process, both of which typically are used to finance the purchase of our products, which resulted in the unexpected cancelation of orders and delays in the performance of PHE Unit and PHE contracts. Although these events caused a decrease in sales, we expect that a portion of the canceled PHE Unit and PHE orders will be reinstated and contracts that have been partially delayed will be performed within this fiscal year or 2012, reducing the impact of the drop in sales over the long term. We are taking steps to increase the sales of our PHE Units and PHEs by continuing our expansion into regional areas of China and are encouraged by our progress in establishing sales channels in North and South America, which we expect will meaningfully contribute to revenue in 2012.

Heat meter sales increased from the same period in 2010. Article 38 of China's Energy Conservation Law issued in 2008 requires new apartments and retrofitted apartments to install heat meters; however, the implementation of this government-mandated process varies across regions and takes time, which may cause our heat meter growth rate to fluctuate. Nevertheless, we expect heat meter sales will experience significant growth in the following 2-3 years and believe we will benefit from this growth as we are one of the top heat meter manufacturers in China. We also have been expanding continuously into more regional heat-supply markets as a result of the PRC government's economic stimulus plan that stresses increased domestic infrastructure construction and continuous research and development on new products.

We have a strict review process for approving each sales contract, especially with respect to the determination of a sales price. The sales price is determined under each contract in proportion to our estimated cost in order to ensure our gross profit. Our sales price varies according to each sale depending mainly on each customer's specific requirements and our negotiation of the contract amount and term.

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**Cost of Sales.** Cost of sales for the three months ended June 30, 2011, was \$4.43 million, while our cost of sales for the same period of 2010 was \$14.99 million, a decrease of \$10.55 million or 70%. Cost of sales mainly consisted of the cost of materials and labor, as well as factory overhead. Materials cost is normally 80% of total cost, while factory overhead cost is about 15% and labor cost is about 5%. The decrease in cost of sales is attributable to the decrease in production and sales volume in the three months ended June 30, 2011. Cost of sales as a percentage of sales was 62.6% for the three months ended June 30, 2011, and 65.8% for the same period of 2010. The decrease in cost of sales as a percentage of sales was due to our effective control over inventory and raw material purchasing. We believe our cost of sales will remain stable as a result of stronger sales in new product areas, our research and development capability, our current pricing strategy and the continued improvement in the efficiency of our manufacturing facilities.

**Gross Profit.** Gross profit was \$2.65 million for the three months ended June 30, 2011, compared to \$7.78 million in the same period of 2010, or gross profit margins of 37.4% and 34.2%, respectively. The increase in our gross profit margin was due to the decrease of cost of sales as a percentage of sales.

**Operating Expenses.** Operating expenses consisting of selling, general and administrative expenses totaled \$9.75 million for the three months ended June 30, 2011, compared to \$3.78 million for the same period of 2010, an increase of \$5.97 million or 158%. Operating expenses as a percentage of sales were 137.8% in the three months ended June 30, 2011, compared to 16.6% in the same period of 2010. The increase in operating expenses mainly resulted from increased bad debt allowance of approximately \$4.01 million and expansion of our business, which included additional costs of hiring more sales personnel, higher depreciation expense, training our marketing team and establishing new sales offices in more regions of China. Due to the stringent fiscal policy of the Chinese government, some of our state-owned customers encountered difficulties in obtaining grants from the government and loans from state-owned banks, both of which typically are used to finance the purchase of our products, which resulted in unexpected delays in paying our accounts receivable in a timely manner. As a result of these delays, we recorded \$3.74 million bad debt allowance in the three months ended June 30, 2011. We do not expect a significant risk with respect to the overdue accounts receivable for which we took the bad debt allowance and believe that a substantial portion of the bad debt will be repaid as the Chinese government restores grants and credit policies. We believe the government's stringent fiscal policy impacting our customers will be temporary and the expansion and training of our marketing team and other employees to date will increase sales and improve the efficiency of our operations. Nevertheless, we will institute a rigorous program of cost cutting to continue to tightly control our budget and implement additional cost control measures, including a review of the staffing levels of our employees in response to the decrease in revenue.

**Net Income (Loss).** Our net loss for the three months ended June 30, 2011, was \$6.42 million compared to net income of \$3.39 million for the same period of 2010, a decrease of \$9.81 million or 289%. Net loss as a percentage of sales was 90.7% in the three months ended June 30, 2011, and net income as a percentage of sales was 14.9% in the 2010 period. This decrease in net income was attributable to the temporary decrease of net sales and increased bad debt allowance reserve.

## Liquidity and Capital Resources

On November 23, 2010, we closed a public offering of 5,740,814 shares of our common stock at \$5.00 per share, which includes 740,814 shares sold as a result of the underwriters exercising their over-allotment option. After underwriting discounts and commissions and related expenses, we received net proceeds of \$27,040,741.

Six Months Ended June 30, 2011, Compared to the Six Months Ended June 30, 2010

As of June 30, 2011, we had cash and equivalents of \$21.19 million. Working capital was \$109.44 million at June 30, 2011. The ratio of current assets to current liabilities was 4.89:1 at June 30, 2011.

The following is a summary of cash provided by or used in each of the indicated types of activities during the six months ended June 30, 2011 and 2010:

	2011	2010
Cash provided by (used in):		
Operating activities	\$ (24,947,855)	\$ (6,602,536)
Investing activities	\$ (15,641,199)	\$ (5,235,017)
Financing activities	\$ 4,159,252	\$ (5,816,537)

Net cash flow used in operating activities was \$24.95 million in the six months ended June 30, 2011, compared to net cash flow used in operating activities of \$6.60 million in the same period of 2010. The increase in net cash outflow in operating activities was due mainly to decreased net income, increased payment of advance to suppliers and payment made for income tax and value-added tax ("VAT").

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Net cash flow used in investing activities was \$15.64 million in the six months ended June 30, 2011, compared to net cash used in investing activities of \$5.24 million in the same period of 2010. The increase of net cash flow used in investing activities was due mainly to the acquisition of Bingchuan and GWP for \$13.54 million, purchase of property and equipment of \$2.14 million, \$0.42 million increase in restricted cash and \$0.43 million on construction in progress, partially offset by cash acquired from acquisition for \$0.45 million and proceeds from note receivables of \$0.53 million.

Net cash flow provided by financing activities was \$4.16 million in the six months ended June 30, 2011, compared to net cash used in financing activities of \$5.82 million in the same period of 2010. The cash inflow was mainly from the proceeds from a short-term loan of \$5.46 million and capital contribution from noncontrolling interest of \$0.75 million, partially offset by payment on notes payable of \$2.05 million, while in the 2010 period, we had \$0.09 million cash inflow from warrants exercised, but repaid \$4.25 million on short-term loans and \$1.65 million on notes payable.

Our agreements with our customers generally provide that 30% of the purchase price is due upon the placement of an order, 30% upon delivery and 30% upon installation and acceptance of the equipment after customer testing. As a common practice in the heating manufacturing business in China, payment of the final 10% of the purchase price is due no later than the termination date of the standard warranty period, which ranges from 3 to 24 months from the acceptance date. Our receipts for payment on our products depend on the complexity of the equipment ordered, which impacts manufacturing, delivery, installation, testing times and warranty periods. For example, PHEs are less complex than PHE Units and therefore have a shorter manufacturing, acceptance, warranty and payment schedule. We may experience payment delays from time to time, which historically have been from 1 to 3 months from the due date, but given the temporary financial difficulties of some of our state-owned customers in China during the first half of 2011, we have experienced longer payment delays from these customers. Our accounts receivable and inventory turnover are relatively low and days sales outstanding ratio relatively high. Consequently, collection on our sales is slow and capital is tied up in inventories, which may result in pressure on cash flows. For the six months ended June 30, 2011, we had accounts receivable turnover of 2.37 on an annualized basis, with days sales outstanding of 154 and inventory turnover of 2.13 on an annualized basis. For the six months ended June 30, 2010, we had accounts receivable turnover of 2.76 on an annualized basis, with days sales outstanding of 132 and inventory turnover of 3.18 on an annualized basis. The low accounts receivable turnover and high days outstanding was due to the temporary financial difficulties of some of our state-owned customers that resulted in a delay in their making payments to us. The low inventory turnover rate was due to our decreased sales volume as a result of our state-owned customers' temporary financial difficulty.

We recognize the final 5-10% of the purchase price as a retention receivable, which is due no later than the termination of our warranty period. The deferral of the final payment is a common practice in the heating manufacturing business in China. Sometimes our customers are required to deposit 5-10% of the sales price on high value products, like an assembled heat exchanger unit or the main part of a plate heat exchanger, into designated bank accounts as restricted cash for securing the payment after such period expires. Based on our historical experience, there have been no defaults on such deferrals. Therefore, we believe the potential risks and uncertainty associated with defaults on such receivables are not material.

Off-Balance Sheet Arrangements

We have not entered into any other financial guarantees or other commitments to guarantee the payment obligations of any third parties. We have not entered into any derivative contracts that are indexed to our shares and classified as stockholders' equity or that are not reflected in our consolidated financial statements. Furthermore, we do not have any retained or contingent interest in assets transferred to an unconsolidated entity that serves as credit, liquidity or market risk support to such entity. We do not have any variable interest in any unconsolidated entity that provides financing,



liquidity, market risk or credit support to us or engages in leasing, hedging or research and development services with us.

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## Contractual Obligations

We were obligated for the following short term loans payable as of June 30, 2011, and December 31, 2010:

	2011	2010
From a commercial bank in the PRC for RMB 3,000,000 entered into on June 30, 2011. The loan currently bears interest at 6.63% with maturity on June 29, 2012. The loan was guaranteed by a third party.	\$ 463,564	\$ -
From a commercial bank in the PRC for RMB 13,000,000 entered into on August 9, 2010. The loan currently bears interest at 5.31% with maturity on June 30, 2011. We pledged our building and land use rights for this loan. The loan was paid in full when it matured.	-	1,962,946
From a commercial bank in the PRC for RMB 5,000,000 entered into on October 19, 2010. The loan currently bears interest at 5.84% with maturity on October 18, 2011. The loan was pledged by bank deposit.	772,606	754,979
From a commercial bank in the PRC for RMB 17,000,000 entered into on June 1, 2010. The loan currently bears interest at 5.31% with maturity on June 30, 2011. The loan was guaranteed by a third party. The loan was paid in full when it matured.	-	2,566,929
From a commercial bank in the PRC for RMB 25,000,000 entered into on October 18, 2010. The loan currently bears interest at 5.84% with maturity on October 17, 2011. The loan was pledged by bank deposit.	3,863,032	3,774,895
From a commercial bank in the PRC for RMB 50,000,000 entered into on June 29, 2011. The loan currently bears interest at 6.94% with maturity on January 27, 2012. The loan was guaranteed by SanDeKe.	7,726,065	-
From a commercial bank in the PRC for RMB 10,000,000 entered into on June 27, 2011. The loan currently bears interest at 7.57% with maturity on June 27, 2012. The loan was pledged by bank deposit.	1,545,213	-
From a commercial bank in the PRC for RMB 3,200,000 entered into on March 15, 2011. The loan currently bears interest at 6.72% with maturity on July 14, 2011. We pledged saving deposit for this loan.	494,468	-
From a commercial bank in the PRC for RMB 1,040,000 entered into on April 29, 2011. The loan currently bears interest at 7.02% with maturity on August 26, 2011. We pledged saving deposit for this loan.	160,702	-
From a commercial bank in the PRC for RMB 3,500,000 entered into on June 2, 2011. The loan currently bears interest at 7.02% with maturity on September 29, 2011. We pledged saving deposit for this loan.	540,825	-
	\$ 15,566,475	\$ 9,059,749

## Item 3. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risks related to fluctuations in currency exchange rates and commodity prices for certain of our raw materials. We currently do not engage in forward foreign exchange agreements or other hedging transactions in an effort to reduce our exposure to foreign currency exchange risk. We do not engage in hedging transactions to protect against raw material pricing fluctuations; instead, we attempt to mitigate the short-term risks of price swings by purchasing raw materials in advance.

Our Annual Report on Form 10-K for the year ended December 31, 2010, contains information about our exposure to market risks under "Item 7A. Quantitative and Qualitative Disclosures about Market Risk." There has been no material change in our exposure to market risks during the three months ended June 30, 2011.

#### Item 4. Controls and Procedures

##### Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, our principal executive officer and principal financial officer, respectively, evaluated the effectiveness of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act as of the end of the period covered by this report. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of June 30, 2011, our disclosure controls and procedures were not effective as of such date because of a material weakness identified in our internal control over financial reporting related to our internal level of U.S. GAAP expertise. We lack sufficient personnel with the appropriate level of knowledge, experience and training in U.S. GAAP for the preparation of financial statements in accordance with U.S. GAAP. None of our internal accounting staff, including our Chief Financial Officer, that are primarily responsible for the preparation of our books and records and financial statements in compliance with U.S. GAAP holds a license such as Certified Public Accountant in the U.S., nor have any attended U.S. institutions or extended educational programs that would provide enough of the relevant education relating to U.S. GAAP. Our Board of Directors and management have implemented measures to mitigate this material weakness and are evaluating remediation measures that we will undertake to address this material weakness, and will continue this evaluation in order to implement a comprehensive remediation plan. Until such time as we hire qualified accounting staff and train our current accounting staff with the requisite U.S. GAAP experience, however, it is unlikely we will be able to remediate this material weakness in our internal control over financial reporting. Notwithstanding this material weakness, our management has concluded that our consolidated financial statements for the periods covered by and included in this report are prepared in accordance with U.S. GAAP and fairly present, in all material respects, our financial position, results of operations and cash flows for each of the periods presented herein.

##### Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) during our most recently completed fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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PART II. OTHER INFORMATION

Item 1. Legal Proceedings

We may become involved in various lawsuits and legal proceedings arising in the ordinary course of business. Litigation is subject to inherent uncertainties and an adverse result in these or other matters may arise from time to time that may have an adverse effect on our business, financial conditions or operating results. We are currently not aware of any such legal proceedings or claims that will have, individually or in the aggregate, a material adverse effect on our business, financial condition or operating results.

Item 1A. Risk Factors

You should consider carefully the factors discussed in the “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2010, which could materially affect our business. There have been no material changes to the risk factors described previously in that Annual Report.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3. Defaults Upon Senior Securities

None.

Item 5. Other Information

None.

Item 6. Exhibits

See the Exhibit Index following the signature page to this Quarterly Report on Form 10-Q for a list of exhibits filed or furnished with this report, which Exhibit Index is incorporated herein by reference.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

SMARTHEAT INC.  
(Registrant)

Date: April 13, 2012

By: /s/ Jun Wang  
Jun Wang  
Chief Executive Officer  
(Principal Executive Officer)

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## EXHIBIT INDEX

Exhibit No.	Document Description
31.1 †	<u>Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>
31.2 †	<u>Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>
32.1 ‡	<u>Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, as signed by the Chief Executive Officer</u>
32.2 ‡	<u>Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, as signed by the Chief Financial Officer</u>
101.INS†	XBRL Instance Document
101.SCH†	XBRL Schema Document
101.CAL†	XBRL Calculation Linkbase Document
101.DEF†	XBRL Definition Linkbase Document
101.LAB†	XBRL Label Linkbase Document
101.PRE†	XBRL Presentation Linkbase Document

† Filed herewith

‡ Furnished herewith

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