SUPPLEMENT NO. 3 DATED 14 MAY 2018
TO THE REGISTRATION DOCUMENT DATED 30 JUNE 2017

J.P. Morgan Structured Products B.V.
(*incorporated with limited liability in The Netherlands*)

and

J.P. Morgan Securities plc
(*incorporated with limited liability in the United Kingdom*)

This supplement pursuant to section 16 of the German Securities Prospectus Act (*Wertpapier-prospektgesetz*) (the "**Supplement**") constitutes a supplement to the registration document dated 30 June 2017 (the "**Original Registration Document**") as supplemented by Supplement No. 1 dated 13 October 2017 and Supplement No. 2 dated 3 May 2018 (the Original Registration Document as so supplemented, the "**Registration Document**") constituting two registration documents: (i) the registration document in relation to J.P. Morgan Structured Products B.V., Amsterdam, The Netherlands (the "**Issuer**" or "**JPMSP**") and (ii) the registration document in relation to J.P. Morgan Securities plc, London, United Kingdom as guarantor for certain securities issued by JPMSP ("**JPMS plc**" or, the "**Guarantor**").

Subject of this Supplement is the inclusion of new factors into the Registration Document by incorporation by reference following the publication of the audited JPMS plc Annual Report for the financial year ended 31 December 2017 (the "**JPMS plc 2017 Annual Report**"). The JPMS plc 2017 Annual Report has been published on 9 May 2018.

Amendments and supplemental information to Registration Document

I. Amendments in relation to the Table of Contents

In the Table of Contents on page 2 of the Registration Document the following item shall be inserted prior to the item "SIGNATURE PAGE":

"APPENDIX III…………………………………………………………………………………..………H-1"

II. Amendments to the section "I. RISK FACTORS"

The information contained in the subsection "8.8. JPMS plc is subject to particular risks in relation to European and UK regulation of the financial service industry" on page 21 et seq. of the Registration Document shall be deleted and replaced by the following information:

"**8.8 JPMS plc is subject to particular risks in relation to European and UK regulation of the financial service industry**

As a credit institution, regulated by the Financial Conduct Authority ("**FCA"**) and the Prudential Regulation Authority ("**PRA**") in the United Kingdom and as a subsidiary of a systemically important financial institution, JPMS plc is subject to extensive regulation principally in the United Kingdom and the EU. JPMS plc faces the risk of significant intervention by regulatory and tax authorities in all jurisdictions in which it conducts its businesses. In many cases, JPMS plc's activities may be subject to overlapping and divergent regulation in different jurisdictions.

Among other things, as a result of regulators or private parties challenging JPMS plc's compliance with laws and regulations, it could be fined, prohibited from engaging in certain business activities, subject to limitations or conditions on its business activities or subjected to new or substantially higher taxes or other governmental charges in connection with the conduct of its businesses or with respect to its employees. Such limitations or conditions may negatively impact JPMS plc's profitability.

Separate and apart from the impact on the scope and profitability of JPMS plc's business activities, day-to-day compliance with laws and regulations, in particular those laws and regulations adopted since 2008, has involved and will continue to involve significant amounts of time, including that of

JPMS plc's senior leaders and that of an increasing number of dedicated compliance and other reporting and operational personnel, all of which may negatively impact JPMS plc's profitability.

If there are new laws or regulations or changes in the enforcement of existing laws or regulations applicable to JPMS plc's businesses or those of JPMS plc's clients, including capital, liquidity, leverage, loss absorbing capacity, position limits, registration and margin requirements, restrictions on other business practices, reporting requirements, requirements relating to the implementation of the EU Bank Recovery and Resolution Directive ("**BRRD**"), tax burdens and compensation restrictions, that are imposed on a limited subset of financial institutions (either based on size, activities, geography or other criteria) which may include JPMS plc, compliance with these new laws and regulations and amendments to such laws and regulations, or changes in the enforcement of existing laws or regulations, could adversely affect JPMS plc's ability to compete effectively with other institutions that are not affected in the same way. In addition, regulation imposed on financial institutions or market participants generally, such as taxes on financial transactions, could adversely impact levels of market activity more broadly, and thus impact JPMS plc's businesses.

There is an extensive and complex program of final and proposed regulatory enhancements which reflects, in part, the EU's commitment to the G20 policy framework. These proposed or adopted numerous market reforms that have impacted and may continue to impact JPMS plc's businesses. These include stricter capital and liquidity requirements, including legislation (in the form of Capital Requirements Directive and Capital Requirements Regulation, collectively known as "**CRD IV**") to implement the Basel Committee's December 2010 final capital framework for strengthening international capital standards (the "Basel III" capital requirements) for JPMS plc. In addition, bank and investment firm recovery and resolution; bank structure; securities settlement; transparency and disclosure of securities financing transactions; benchmarks; restrictions on short selling and credit default swaps; additional obligations and restrictions on the management and marketing of funds in the EU; revisions to the laws on corporate governance; anti money-laundering controls; data security and privacy as well as significant reviews to law on corporate governance in financial firms, sanctions and market conduct rules. Furthermore, the Markets in Financial Instruments Regulation and a revision of the Markets in Financial Instruments Directive (collectively, "**MiFID II**") became effective in January 2018.

These developments could impact JPMS plc's profitability and competitive position in the affected jurisdictions, particularly if these requirements do not apply, or do not apply equally, to JPMS plc's competitors or are not implemented uniformly across jurisdictions. They could even make it uneconomic to continue to conduct all or certain businesses in such jurisdictions, or could result in JPMS plc incurring significant costs associated with changing business practices, restructuring businesses, moving certain businesses and employees to other locations or complying with applicable capital requirements, including liquidating assets or raising capital in a manner that adversely increases JPMS plc's funding costs or otherwise adversely affects its shareholder and creditors.

Increasingly, regulators and courts have sought to hold financial institutions liable for the misconduct of their clients where such regulators and courts have determined that the financial institution should have detected that the client was engaged in wrongdoing, even though the financial institution had no direct knowledge of the activities engaged in by its client. Regulators and courts have also increasingly found liability as a "control person" for activities of entities in which financial institutions or funds controlled by financial institutions have an investment, but which they do not actively manage. In addition, regulators and courts continue to seek to establish "fiduciary" obligations to counterparties to which no such duty had been assumed to exist. To the extent that such efforts are successful, the cost of, and liabilities associated with, engaging in brokerage, clearing, market-making, prime brokerage, investing and other similar activities could increase significantly. To the extent that JPMS plc has fiduciary obligations in connection with acting as a financial adviser, investment adviser or in other roles for individual, institutional, sovereign or investment fund clients, any breach, or even an alleged breach, of such obligations could have materially negative legal, regulatory and reputational consequences.

Trading and clearing legislation

In the EU, there have been significant regulatory reforms to give effect to the 2009 G20 policy agenda. This includes European Market Infrastructure Regulation ("**EMIR**"), which began in 2012 and MiFID II/R, which began on 3 January 2018.

EMIR requires, among other things, the central clearing of certain standardised derivatives and risk mitigation techniques for uncleared OTC ("**over-the-counter**") derivatives. EMIR is currently being reviewed as part of the European Commission's EMIR Regulatory Fitness and Performance programme ("**REFIT**") legislative proposal, but this has not yet been finalised. EMIR REFIT proposes to introduce targeted changes to EMIR to streamline the rules and make them less burdensome for certain counterparties.

MiFID II/R gives effect to the G20 commitment to move trading of standardised OTC derivatives to exchanges or electronic trading platforms as well as significantly enhances requirements for pre- and post-trade transparency, clearing, trade and transaction reporting and investor protection, and introduces a commodities position limits and reporting regime. MiFID II/R has introduced expanded requirements for a broad range of investment management activities within their investor protection requirements, including product governance, transparency on costs and charges, independent investment advice, inducements, record keeping and client reporting.*Loss absorbency requirements under the EU Bank Recovery and Resolution Directive*

The EU Bank Recovery and Resolution Directive ("**BRRD**") and the UK transposition of the Directive established a requirement for the Bank of England ("**BoE**") to set a minimum requirement for own funds and eligible liabilities ("**MREL**"). The BoE finalised its policy for setting external MREL in November 2016, which confirmed that the BoE will apply a level of MREL in line with the global Total Loss Absorbing Capacity ("**TLAC**") standard, including with regards to timing (transitional arrangements will apply from 1 January 2019, with full compliance required by 1 January 2022). TLAC is intended to facilitate the resolution of a financial institution without causing financial instability and without recourse to public funds. The BoE subsequently issued a consultation paper on its proposed approach to setting internal MREL in October 2017 which confirmed that implementation of internal MREL requirements will follow the same timeline as for external MREL. The BoE is expected to finalise its internal MREL policy in 2018, with a view to communicating Firm-specific interim targets ahead of the 1 January 2019 implementation date.

The potential impacts of these requirements on JPMS plc are currently being considered. Once communication of the end state requirement has been provided, JPMS plc will establish plans to ensure compliance with the requirements by the conformance date. In the interim period however, JPMS plc considers compliance with current minimum capital requirements to represent compliance with its transitional MREL.

Capital Requirements Directive V ("CRD V'//Capital Requirements Regulation 2 ("CRR 2")

The CRD V/CRR 2 proposal for revised capital and liquidity legislation for banks and investment firms will implement in the EU many of the finalised Basel Ill capital and liquidity standards, including changes in relation to the leverage ratio, market risk capital, and a stable funding ratio.

The European Council and the European Parliament continue to consider amendments to the European Commission's proposal from November 2016 to amend CRD IV/CRR. The trilogue process is expected to commence in 2018, albeit the date of implementation remains difficult to predict. The proposals also include a transitional provision effectively delaying the implementation of most of the new proposals for a further two years after the formal adoption of the legislation. Thus, a January 2021 start date for the significant capital elements of the proposal seems likely. The changes proposed to the capital framework will require significant preparatory work both in terms of interpretation and implementing the new rules, the proposals of which are set out below.

- The legislation proposes an intermediate parent undertaking ("**IPU**") requirement for foreign banks, which will require non EU banks operating in Europe (with total EU assets of more than EUR 30 bn or which are part of a global systemically important banks ("**G-SIBs**")) to establish a single EU-located IPU. The full impact of the proposal on JPMS plc's operations will be heavily influenced by the outcome of the EU legislative process, including whether any flexibility is introduced to the requirement.

- The Fundamental Review of the Trading Book ("**FRTB**") overhauls the market risk capital requirements and aims to develop a new trading book framework. The impact on JPMS plc has not been quantified at this stage under these updated proposals.

- Standardised approach to measuring counterparty credit risk exposures ("**SA-CCR**") includes provisions differentiating between margined and un-margined transactions and improving the capital framework's risk sensitivity. SA-CCR also provides clearer recognition of netting benefits and the degree of volatility in counterparty exposures. In practice, JPMS plc is expected to implement the Internal Model Method ("IMM") approach for a large part of its exposures by the time SA-CCR is implemented, reducing the impact of the latter.

- The leverage ratio was introduced in Basel 3 (and transposed into CRR), as a non-risk based measure of the level of capital held by a firm. It is calculated by assessing Tier 1 capital to Total Exposures. The amendments now mandate a binding ratio, set at 3%, with discretion afforded to national authorities to increase this requirement if they deem necessary. It is not expected that the European implementation of the leverage ratio requirements will be a binding constraint on JPMS plc.

The Basel Committee recently finalised certain changes to the Basel Ill framework which includes revisions to the standardised approach to credit risk and operational risk calculation methods. They will affect JPMS plc only once implemented in the EU through changes to the CRD. Note that no firm plans for implementation of these changes have been set out by the EU legislative bodies."

III. Amendments to the section "VI. J.P. MORGAN SECURITIES PLC"

The information contained in the subsection "4. Trend Information" on page 37 et seq. of the Registration Document shall be deleted and replaced by the following information:

"There has been no material adverse change in the prospects of JPMS plc since 31 December 2017.

The following statements are based on the current beliefs and expectations of JPMS plc"s management and are subject to significant risks and uncertainties. These risks and uncertainties could cause JPMS plc's actual results to differ materially from those set forth in such forward-looking statements. See

"Cautionary Note Regarding Forward-Looking Statements" and "Risk Factors" in this Registration Document.

Future outlook

The outlook of JPMS plc for the full 2018 year should be viewed against the backdrop of the global economy, financial markets activity, the geopolitical environment, the competitive environment, client activity levels and regulatory and legislative developments in the countries where JPMS plc does business. Each of these inter-related factors will affect the performance of JPMS plc and its lines of business ("**LOB's**").

On 23 June 2016, the UK voted by referendum to leave the European Union ("**Brexit**"). The UK Government invoked Article 50 of the Lisbon Treaty on 29 March 2017, starting a two year period for the formal exit negotiations. This means that the UK will leave the EU on 29 March 2019 assuming the timeline is not unanimously extended by the remaining 27 EU Member States ("**EU 27**") and the UK. Formal negotiations began on 19 June 2017. In December 2017, the EU27 agreed that 'sufficient progress' had been made on the terms of the UK's withdrawal to allow parallel talks on the future relationship, and on 23 March 2018, the European Council announced a political agreement with the UK for a 21-month transition period, and adopted negotiating guidelines on the long-term agreement.

The UK's priorities in negotiating the future relationship are to seek a bilateral free trade agreement with the EU 27 that facilitates the 'greatest possible access' to the Single Market, but that the UK will not seek to continue its membership of the Single Market. The current EU position, as set out in Council negotiating directives, is that negotiations will address trade in both goods and services, with the aim of allowing market access under host state rules, but that any future framework should safeguard financial stability in the EU and respect its regulatory and supervisory regime. Formal talks on the broad set of future relationship issues began in early April. On 23 March 2018 EU leaders confirmed that a political agreement had been reached with the UK that provisions for a 21-month transition period following Brexit to be included in the Withdrawal Agreement. The Withdrawal agreement will need to be ratified by the UK and European Parliament before the UK's official exit date of 29 March 2019.

Brexit will have significant impact across the Firm's European businesses, including business and legal entity reorganisation. However, the situation remains highly uncertain, including in relation to whether a transition period is secured and whether financial services will be included in any future free trade agreement.

The impact of Brexit on JPMS plc's business model and risks will continue to be assessed as part of the firmwide strategy in considering a strategic post-Brexit legal entity structure.

In response to the strategic changes which will be required under Brexit, there is potential that migrations of business out of JPMS plc into other EU entities will need to occur. Furthermore, it is possible that some surplus capital resources will be released and could be transferred from JPMS plc to support business transferred into other EU entities. The amount of any such transfers is still to be determined.

Regulatory Developments

In the EU, there is an extensive and complex program of final and proposed regulatory enhancement that reflects, in part, the EU's commitments to policies of the Group of Twenty Finance Ministers and Central Bank Governors ("**G20**") together with other plans specific to the EU. The EU operates a European Systemic Risk Board that monitors financial stability, together with European Supervisory Authorities ("**ESAs**") that set detailed regulatory rules and encourage supervisory convergence across the EU's Member States. The EU is currently reviewing the ESA framework. The EU has also created a Single

Supervisory Mechanism for the eurozone, under which the regulation of all banks in that zone will be under the auspices of the European Central Bank, together with a Single Resolution Mechanism and Single Resolution Board, having jurisdiction over bank resolution in the zone. At both the G20 and EU levels, various proposals are under consideration to address risks associated with global financial institutions.

The EU is also currently considering or implementing significant revisions to laws covering securities settlement; mutual funds and pensions; payments; anti-money laundering controls; data security and privacy; transparency and disclosure of securities financing transactions; benchmarks; resolution of banks, investment firms and market infrastructures; and capital and liquidity requirements for banks and investment firms.

Consistent with the G20 and EU policy frameworks, UK regulators have adopted a range of policy measures that have significantly changed the markets and prudential regulatory environment in the UK. In addition, UK regulators have introduced measures to enhance accountability of individuals, and promote forward-looking conduct risk identification and mitigation, including by introducing the senior managers and certification regimes."

In the paragraph "Historical financial information" in the subsection "6. Financial Information" on page 40 of the Registration Document the following information shall be added at the end:

"Financial information of JPMS plc for the financial year 2017 ("**JPMS plc 2017 Annual Report**") prepared in accordance with United Kingdom Accounting Standards, comprising FRS 101 "Reduced Disclosure Framework", and applicable law (United Kingdom Generally Accepted Accounting Practice) can be found in Appendix III of the Registration Document (pages H-1 to H-52)."

The information contained in the first paragraph in the subsection "Auditing of historical financial information" in the subsection "6. Financial Information" on page 40 of the Registration Document shall be deleted and replaced by the following information:

"PricewaterhouseCoopers LLP, Chartered Accountants and Statutory Auditors, have audited without qualification JPMS plc's audited financial statements. A copy of the auditor's report from the JPMS plc 2016 Annual Report appears on pages F-3 to F-4 of Appendix I and from the JPMS plc 2015 Annual Report at pages G-3 to G-4 of Appendix II and from the JPMS plc 2017 Annual Report at pages H-3 to H-9 of Appendix III to this Registration Document. PricewaterhouseCoopers LLP has no material interest in JPMS plc."

The information contained in the subsection "9. No significant change in Issuer's financial or trading position" on page 41 of the Registration Document shall be deleted and replaced by the following information:

"There have been no significant changes in the financial position of JPMS plc since 31 December 2017."

IV. Amendments to the section "VII. DOCUMENTS ON DISPLAY"

In the section "VII. DOCUMENTS ON DISPLAY" on page 42 of the Registration Document the following item shall be added at the end of the list:

"(ii) JPMS plc 2017 Annual Report and the JPMS plc 2016 Annual Report;"

V. Amendments in relation to the Appendices of the Registration Document

The information contained in Schedule I to this supplement shall be added as new "Appendix III: Audited financial information of J.P. Morgan Securities plc for the financial year 2017" prior to the signature page of the Registration Document.

Schedule I

APPENDIX III

Audited financial information of
J.P. Morgan Securities plc
for the financial year 2017

J.P. MORGAN SECURITIES PLC

(Registered Number: 02711006)

Annual report for the year ended 31 December 2017

Independent auditors' report to the members of J.P. Morgan Securities plc

Report on the audit of the financial statements

Opinion

In our opinion, J.P. Morgan Securities plc's financial statements:

- give a true and fair view of the state of the company's affairs as at 31 December 2017 and of its profit and cash flows for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 101 "Reduced Disclosure Framework", and applicable law); and
- have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements, included within the Annual Report, which comprise: the balance sheet as at 31 December 2017; the income statement, the statement of comprehensive income, the statement of cash flows, the statement of changes in equity for the year then ended; and the notes to the financial statements, which include a description of the significant accounting policies.

Our opinion is consistent with our reporting to the Audit Committee.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

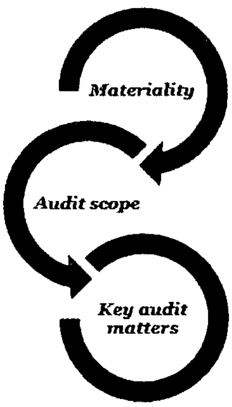
We remained independent of the company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, as applicable to public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, we declare that non-audit services prohibited by the FRC's Ethical Standard were not provided to the company.

Other than those disclosed in note 10 to the financial statements, we have provided no non-audit services to the company in the period from 1 January 2017 to 31 December 2017.

Our audit approach

Overview



- Overall materiality: $401 million (2016: $343 million), based on 1% of regulatory capital resources as required by the Prudential Regulatory Authority.

- We tailored the scope of our audit to ensure that we performed sufficient work to be able to give an opinion on the financial statements as a whole. Our scoping considered all account balances and was performed to ensure that specific and appropriate audit procedures were performed over material balances.
- Due to some business process and internal controls being performed in other geographical locations, PwC network firms were involved in the engagement.

- Valuation of complex financial instruments held at fair value.
- Cash and securities reconciliation system migration.

Independent auditors' report to the members of J.P. Morgan Securities plc

The scope of our audit

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we looked at where the directors made subjective judgements, for example in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain.

We gained an understanding of the legal and regulatory framework applicable to the company and the industry in which it operates, and considered the risk of acts by the company which were contrary to applicable laws and regulations, including fraud. We designed audit procedures to respond to the risk, recognising that the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion. We focused on laws and regulations that could give rise to a material misstatement in the company's financial statements, including, but not limited to, Companies Act 2006, Pensions legislation, UK tax legislation, the Prudential Regulation Authority's regulations and Financial Conduct Authority's Client Asset Sourcebook. Our tests included, but were not limited to, review of the financial statement disclosures to underlying supporting documentation, review of correspondence with the regulators, enquiries of management, review of significant components auditors' work and review of internal audit reports in so far as they related to the financial statements. There are inherent limitations in the audit procedures described above and the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely we would become aware of it.

We did not identify any key audit matters relating to irregularities, including fraud. As in all of our audits we also addressed the risk of management override of internal controls, including testing journals and evaluating whether there was evidence of bias by the directors that represented a risk of material misstatement due to fraud.

Independent auditors' report to the members of J.P. Morgan Securities plc

Key audit matters

Key audit matters are those matters that, in the auditors' professional judgement, were of most significance in the audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by the auditors, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters, and any comments we make on the results of our procedures thereon, were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. This is not a complete list of all risks identified by our audit.

Key audit matter	*How our audit addressed the key audit matter*
Valuation of complex financial instruments held at fair value The fair value of certain financial instruments is determined using valuation methods that involve a varying degree of judgement. In exercising this judgement the directors determine the most appropriate assumptions and valuation methodologies. The valuation of complex financial instruments can have greater estimation uncertainty due to the lack of observable market prices for these instruments. Within this population of financial instruments we observed the most significant judgements relate to equity derivatives. These products are non-standard and often require more judgemental valuation methodologies and market information that is not readily available. Refer to Note 4 and Note 28 to the financial statements for further details of fair value measurement of financial instruments as a critical accounting estimate and judgement.	We tested the design and operating effectiveness of the key controls supporting the valuation of financial instruments. • Assessed the bank's standardised approach documents for independent valuation by comparing them to industry practice; • Inspected documentation of the independent price verification controls, independently corroborated the market inputs and assessed the pricing sources used; • Engaged our valuation experts to review model validation and approval controls; and • Evaluated controls over data feeds and market information. Our substantive procedures included the following: • Analysed the population of financial instruments to identify those that have a heightened risk of material misstatement; • Utilised our valuation experts to re-price a sample of instruments using our models and pricing information from independent sources where possible. Any differences were assessed to confirm the valuation was within a reasonable range; • Recalculated adjustments made to the standard model results; and • Examined collateral disputes, significant gains or losses on disposals and other events which could provide evidence about the appropriateness of the valuations. The results and conclusions of the testing were sufficient to confirm the appropriateness of the valuation of financial instruments within the financial statements.

Key audit matters (continued)

Key audit matter	***How our audit addressed the key audit matter***
Cash and securities reconciliation system migration During the year JPMorgan Chase implemented a new reconciliation system that matches transactions and reconciles positions for cash and securities with external agent banks and custodians. The matching and reconciliation of records between JPMorgan ledgers with corresponding third party statements for cash and securities transactions forms an important aspect of our audit. Accordingly, the migration of the reconciliation processes to a new system formed a key area of focus for this year's audit. The focus of our audit work was to obtain appropriate assurance over the design and operating effectiveness of the controls over reconciliations of cash and security transactions.	We focused on the following controls in the new reconciliation system: • Tested IT General Controls over the new cash and securities reconciliation system to assess whether they are designed and operated effectively, specifically focusing on the review of change management, user access management and IT operations; • Assessed the configuration of a sample of the reconciliation matching rules in the new system to assess whether they had been appropriately set up; • Tested key automated controls embedded within the new system, to assess whether they are designed and operating effectively; Additionally we performed the following substantive testing over the migration: • Tested the completeness and accuracy of a sample of open cash and security breaks that were transferred from the *legacy reconciliation system to the new reconciliation* system at the date of migration; and • Understood and assessed the impact of post implementation issues. The work performed and evidence obtained was sufficient for us to support the design and operating effectiveness assessment of the cash and security reconciliations.

How we tailored the audit scope

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the structure of the company, the accounting processes and controls, and the industry in which it operates.

We first established an end-to-end picture of the key processes that supported material balances, classes of transactions and disclosures within the company's financial statements. We subdivided the account balances into different businesses to ensure that the audit procedures performed were specific and appropriate to the nature of the balance and underlying business.

We then determined the type of work that needed to be performed by us in the UK, or from other PwC network firms operating under our instruction. This reflects that certain operational processes which are critical to financial reporting are undertaken outside the UK. Where the work was performed by other PwC network firms, we determined the level of involvement we needed to have in their audit work to be able to conclude whether sufficient appropriate audit evidence had been obtained as a basis for our opinion on the financial statements as a whole.

Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and in evaluating the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

Materiality (continued)

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

Overall materiality	$401 million (2016: $343 million).
How we determined it	1% of regulatory capital resources as defined by the Prudential Regulatory Authority.
Rationale for benchmark applied	Given that the company is a wholly owned subsidiary of JPMorgan Chase & Co. group (the "Firm") and is a regulated bank entity, we considered the key users of its financial statements to be the Firm, regulators and creditors. The Firm run their business on a global basis and hence the profitability of individual subsidiaries on a standalone basis is not the primary, or sole, driver of business decision making in the context of the Firm's enterprise level objectives and strategy. The use of regulatory capital resources as a materiality benchmark is appropriate as it reflects the key area of focus of these stakeholders, who are focused on whether the company has maintained sufficient capital to meet minimum regulatory requirement, fulfil its future market obligations, and absorb any future losses when it arises. Capital resource is deemed as a good indicator of the company's balance sheet strength and liquidity position.

We agreed with the Audit Committee that we would report to them misstatements identified during our audit above $20 million (2016: $17 million) as well as misstatements below that amount that, in our view, warranted reporting for qualitative reasons.

Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which ISAs (UK) require us to report to you when:

- the directors' use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the directors have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the company's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the company's ability to continue as a going concern.

Reporting on other information

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The directors are responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

With respect to the Strategic Report and Directors' Report, we also considered whether the disclosures required by the UK Companies Act 2006 have been included.

Based on the responsibilities described above and our work undertaken in the course of the audit, ISAs (UK) require us also to report certain opinions and matters as described below.

Independent auditors' report to the members of J.P. Morgan Securities plc

Strategic Report and Directors' Report

In our opinion, based on the work undertaken in the course of the audit, the information given in the Strategic Report and Directors' Report for the year ended 31 December 2017 is consistent with the financial statements and has been prepared in accordance with applicable legal requirements.

In light of the knowledge and understanding of the company and its environment obtained in the course of the audit, we did not identify any material misstatements in the Strategic Report and Directors' Report.

Responsibilities for the financial statements and the audit

Responsibilities of the directors for the financial statements

As explained more fully in the Directors' Responsibilities Statement set out on page 28, the directors are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The directors are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the company or to cease operations, or have no realistic alternative but to do so.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditors' report.

Use of this report

This report, including the opinions, has been prepared for and only for the company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

Other required reporting

Companies Act 2006 exception reporting

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the company, or returns adequate for our audit have not been received from branches not visited by us; or
- certain disclosures of directors' remuneration specified by law are not made; or
- the financial statements are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Appointment

Following the recommendation of the audit committee, we were appointed by the directors on 1 May 1992 to audit the financial statements for the year ended 31 December 1992 and subsequent financial periods. The period of total uninterrupted engagement is 26 years, covering the years ended 31 December 1992 to 31 December 2017. The company became a credit institution in 2011, and hence is considered to be a European Union public-interest entity from 2011 onwards.

Duncan McNab (Senior Statutory Auditor)
for and on behalf of PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors
London
24 April 2018

J.P. MORGAN SECURITIES PLC
Income statement

Year ended 31 December	Note	2017	2016
		$'000	$'000
Interest and similar income		3,969,568	2,553,440
Interest expense and similar charges		(3,193,607)	(1,961,858)
Net interest income	7	**775,961**	**591,582**
Fee and commission income		2,863,023	2,516,922
Fee and commission expense		(718,748)	(848,261)
Trading profit		4,489,978	4,142,970
Dividend income		—	600,000
Total operating income		**7,410,214**	**7,003,213**
Administrative expenses		(3,661,928)	(2,897,111)
Impairment charge	8	(147,477)	(117,359)
Depreciation		(1,760)	(1,290)
Profit on ordinary activities before taxation	10	**3,599,049**	**3,987,453**
Tax on profit on ordinary activities	11	(963,590)	(841,809)
Profit for the financial year		**2,635,459**	**3,145,644**

The profit for the financial year resulted from continuing operations.

Statement of comprehensive income

Year ended 31 December	Note	2017	2016
		$'000	$'000
Profit for the financial year		**2,635,459**	**3,145,644**
Other comprehensive income: items that will not be reclassified to profit or loss			
Actuarial gain/(loss) on pension schemes	30	31,871	(74,362)
Tax effect of movement in pension reserve	12	(11,349)	18,908
Total comprehensive income for the year		**2,655,981**	**3,090,190**

The notes on pages 45 - 83 form an integral part of these financial statements.

J.P. MORGAN SECURITIES PLC
Balance sheet

31 December	Note	2017 $'000	2016 $'000
Assets			
Cash and balances at central banks		21,677,066	20,597,168
Loans and advances to banks	13	9,812,066	6,123,936
Loans and advances to customers	14	2,612,322	3,100,053
Securities purchased under agreements to resell	15	135,385,611	130,416,852
Securities borrowed	15	27,072,599	25,831,106
Financial assets held for trading	16	340,258,613	323,045,808
Financial assets designated at fair value through profit or loss	17	341,602	315,659
Debtors	18	79,646,622	56,473,025
Other assets	19	762,089	584,231
Investments in JPMorgan Chase undertakings	20	3,341,207	3,341,207
Tangible fixed assets		4,938	3,582
Total assets		**620,914,735**	**569,832,627**
Liabilities			
Securities sold under agreements to repurchase	15	74,937,158	61,657,271
Securities loaned	15	12,550,040	20,133,325
Financial liabilities held for trading	22	308,288,068	293,525,746
Financial liabilities designated at fair value through profit or loss		1,465,247	—
Trade creditors	23	30,479,035	29,755,510
Amounts owed to JPMorgan Chase undertakings		124,330,471	99,493,803
Other liabilities	23	27,350,196	25,819,149
Total liabilities		**579,400,215**	**530,384,804**
Equity			
Called-up share capital	24	12,443,530	17,546,050
Share premium account		9,950,724	9,950,724
Capital redemption reserve		4,996,040	—
Other reserves		1,701,590	1,797,872
Retained earnings		12,422,636	10,153,177
Total equity		**41,514,520**	**39,447,823**
Total liabilities and equity funds		**620,914,735**	**569,832,627**

Approved and authorised for issue by the Board of Directors on 23 April 2018 and signed on its behalf by:

Sir Winfried Bischoff
Chairman & Non-Executive Director

Elena Korablina
Director & Chief Financial Officer

24 April 2018

The notes on pages 45 - 83 form an integral part of these financial statements.

J.P. MORGAN SECURITIES PLC
Statement of changes in equity

	Note	Called-up share capital	Share premium account	Capital contribution reserve	Capital redemption reserve	Pension reserve	Other reserves	Retained earnings	Total equity
		$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Balance as at 1 January 2016		**17,546,050**	**9,950,724**	**1,588,615**	**—**	**9,875**	**233,011**	**8,057,533**	**37,385,808**
Profit for the financial year		—	—	—	—	—	—	3,145,644	**3,145,644**
Other comprehensive income for the year:									
Actuarial loss on pension schemes	30	—	—	—	—	(74,362)	—	—	**(74,362)**
Tax effect on movement in pension reserve		—	—	—	—	18,908	—	—	**18,908**
Total comprehensive income for the year		**—**	**—**	**—**	**—**	**(55,454)**	**—**	**3,145,644**	**3,090,190**
Dividends paid	25	—	—	—	—	—	—	(1,050,000)	**(1,050,000)**
Tax effect on share based payment awards		—	—	—	—	—	17,677	—	**17,677**
Movement in other reserves		—	—	—	—	—	4,148	—	**4,148**
Balance as at 31 December 2016		**17,546,050**	**9,950,724**	**1,588,615**	**—**	**(45,579)**	**254,836**	**10,153,177**	**39,447,823**
Profit for the financial year		—	—	—	—	—	—	2,635,459	**2,635,459**
Other comprehensive income for the year:									
Actuarial gain on pension schemes	30	—	—	—	—	31,871	—	—	**31,871**
Tax effect on movement in pension reserve		—	—	—	—	(11,349)	—	—	**(11,349)**
Total comprehensive income for the year		**—**	**—**	**—**	**—**	**20,522**	**—**	**2,635,459**	**2,655,981**
Dividends paid	25	—	—	—	—	—	—	(366,000)	**(366,000)**
Share redemption	24	(106,480)	—	—	—	—	—	—	**(106,480)**
Share conversion	24	(4,996,040)	—	—	4,996,040	—	—	—	**—**
Movement in other reserves		—	—	—	—	—	(116,804)	—	**(116,804)**
Balance as at 31 December 2017		**12,443,530**	**9,950,724**	**1,588,615**	**4,996,040**	**(25,057)**	**138,032**	**12,422,636**	**41,514,520**

The notes on pages 45 - 83 form an integral part of these financial statements.

J.P. MORGAN SECURITIES PLC
Statement of cash flows

Year ended 31 December	Notes	2017 $'000	2016 $'000
Cash flows from operating activities			
Cash (used in)/generated from operations	26	**(20,915,074)**	**3,464,344**
Income taxes paid		(759,644)	(339,504)
Net cash (used in)/generated from operating activities		**(21,674,718)**	**3,124,840**
Cash flow used in investing activities			
Purchase and disposals of tangible fixed assets		(3,116)	(2,735)
Disposal of investments in JPMorgan Chase undertakings		—	517
Net cash used in investing activities		**(3,116)**	**(2,218)**
Cash flow from financing activities			
Redemption of share capital	24	(106,480)	—
Change in amounts owed to JPMorgan Chase undertakings		24,836,668	20,853,495
Dividends paid	25	(366,000)	(1,050,000)
Net cash generated from financing activities		**24,364,188**	**19,803,495**
Net increase in cash and cash equivalents		**2,686,354**	**22,926,117**
Cash and cash equivalents at the beginning of the year		26,721,104	4,739,077
Exchange gains/(losses) on cash and cash equivalents		2,081,674	(944,090)
Cash and cash equivalents at the end of the year		**31,489,132**	**26,721,104**
Cash and cash equivalents consist of:			
Cash and balances at central banks		21,677,066	20,597,168
Loans and advances to banks, due within three months or less		9,812,066	6,123,936
Cash and cash equivalents		**31,489,132**	**26,721,104**

The notes on pages 45 - 83 form an integral part of these financial statements.

1. General information

The Company is a public limited company and is incorporated and domiciled in England and Wales. The address of its registered office is 25 Bank Street, Canary Wharf, London, E14 5JP, England. The Company's immediate parent undertaking is J.P. Morgan Capital Holdings Limited, which is also the parent undertaking of the smallest group in which the Company's results are consolidated. The Company's ultimate parent undertaking and controlling party is JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), which is incorporated in the state of Delaware in the United States of America. JPMorgan Chase & Co. is also the parent undertaking of the largest group in which the results of the Company are consolidated. The largest and smallest parent groups' consolidated financial statements can be obtained from the Company's registered office.

2. Basis of preparation

These financial statements have been prepared in accordance with Financial Reporting Standard 101, 'Reduced Disclosure Framework' ("FRS 101"). FRS 101 applies the recognition and measurement requirements of International Financial Reporting Standards ("IFRS") as adopted by the European Union, with reduced disclosures.

The financial statements have been prepared on a going concern basis under the historical cost convention as modified by the revaluation of certain financial assets and financial liabilities measured at fair value through profit or loss, and in accordance with the Companies Act 2006. Reclassification of and adjustments to prior year amounts have been made to conform with current year presentations and to provide additional transparency and information on the nature of the balances in these financial statements.

The following exemptions from the requirements of IFRS as adopted by the EU have been applied in the preparation of these financial statements, in accordance with FRS 101:

- Certain share based payment disclosures in respect of Firm equity instruments (IFRS 2 'Share-based payment' paragraphs 45(b) and 46 to 52);
- Comparative information disclosures for the following (paragraph 38 of IAS 1 'Presentation of financial statements' ("IAS 1"):
  - reconciliation of share capital (paragraph 79(a)(iv) of IAS 1);
  - reconciliation of property, plant and equipment (paragraph 73(e) of IAS 16 'Property, plant and equipment');
  - reconciliation of intangible assets (paragraph 118(e) of IAS 38 'Intangible assets');
- Statement of compliance to IFRSs - Paragraph 16, IAS 1;
- Third balance sheet on retrospective accounting policy changes, restatements, or reclassifications (paragraph 40A-D, IAS 1);
- Disclosures in relation to new or revised standards issued but not yet effective (paragraph 30 and 31, IAS 8, 'Accounting policies, changes in accounting estimates and errors')[1];
- Key management compensation disclosures (paragraph 17, IAS 24 'Related Party Disclosures' ("IAS 24")); and
- Related party transactions with wholly owned Firm undertakings (IAS 24).

1) To provide further detail to the users of the financial statements, the significant new standards, amendments and interpretations not yet adopted have been disclosed for IFRS 9 'Financial instruments' ("IFRS 9") and IFRS 15 'Revenue from Contracts with Customers' ("IFRS 15") (note 3).

3. Accounting and reporting developments

New standards, amendments and interpretations not yet adopted

IFRS 9 'Financial instruments' ("IFRS 9")

IFRS 9 was issued by the International Accounting Standards Board ("IASB") in July 2014 and replaces the existing guidance in IAS 39 'Financial Instruments: Recognition and Measurement' ("IAS 39"). The standard introduces new guidance on the classification and measurement of financial assets and a single, forward-looking expected credit loss ("ECL") impairment model. The standard also requires entities to provide users of financial statements with additional disclosures. IFRS 9 is applicable retrospectively, except where otherwise prescribed by transitional provisions of the standard, and is effective for annual periods beginning on or after 1 January 2018. The Company has adopted the new standard on 1 January 2018.

Implementation programme

The Company has a centrally managed IFRS 9 project team which is focused on ensuring compliance with the standard and any additional requirements associated thereof. Overall governance of the program's implementation is through the IFRS 9 Steering Committee which includes representation from senior leaders in Finance, Corporate Accounting Policy, Risk, Technology and Audit.

3. Accounting and reporting developments (continued)

New standards, amendments and interpretations not yet adopted (continued)

IFRS 9 'Financial instruments' ("IFRS 9") (continued)

Classification and Measurement of Financial Assets and Liabilities

Under IFRS 9, new 'Business Model' and 'Cash Flow Characteristic' tests are introduced which classify financial assets to one of the following three measurement categories: amortised cost, fair value through other comprehensive income ("FVOCI") or fair value through profit or loss ("FVTPL"). Encompassing the guidance provided by IFRS 9 on classification and measurement, the Company has reviewed and deemed financial assets held within a business model with the intention to hold and collect contractual cash flow, and financial assets with the intention to hold and collect contractual cash flow or sell the asset as measured at amortised cost and FVOCI respectively under the condition that contractual cash flows also meet the solely payment of principal and interest ("SPPI") criteria. Financial assets which are not categorised with the intentions highlighted above are deemed to be measured at FVTPL. Additionally, the Company may elect the option to classify financial assets as measured at FVTPL upon initial recognition if such designation may eliminate or reduce an accounting mismatch. On initial adoption of IFRS 9 the Company may also elect the option to designate a currently recognised financial liability as measured at FVTPL to eliminate or reduce an accounting mismatch.

Upon initial assessment of the classification and measurement changes imposed by IFRS 9, the Company anticipates reclassifications to exist for certain populations falling under securities borrowed and securities purchased under agreements to resell which were previously measured at amortised cost but will be measured at FVTPL. Similarly, certain loans and advances to customers measured at amortised cost will be measured at FVOCI. These anticipated reclassifications reflect the business models used to manage these types of assets. In addition, the Company anticipates designating certain financial liability populations falling under securities loaned and securities sold under agreements to repurchase as measured at FVTPL to eliminate or reduce an accounting mismatch that would have otherwise arisen on adoption of IFRS 9. No further reclassifications were identified that were considered to bear a potential material impact on existing asset measurement bases, however, this represents preliminary results from which actual impacts measured from 1 January 2018 may deviate.

IFRS 9 retains most of the existing requirements for financial liabilities. Under the current requirements of IAS 39, the gains and losses attributable to changes in the Company's own credit risk ("DVA") for financial liabilities designated at FVTPL are recognised in profit or loss. However, upon implementation of IFRS 9, this DVA component will be recognised in other comprehensive income. While the standard allows for the early adoption of this recognition, the Company will implement on the effective date of 1 January 2018.

Impairment of Financial Assets

IFRS 9 impairment requirements apply to financial assets that are measured at amortised cost or FVOCI, and specified off-balance sheet lending-related commitments such as loan commitments and financial guarantee contracts.

The determination of impairment losses and allowance will change from an incurred credit loss model under IAS 39 to an ECL model under IFRS 9. In an ECL model, provisions for credit losses are recorded upon initial recognition of the financial asset based on expectations of potential credit losses at that time. The credit loss allowance includes ECLs for financial instruments that may default in the next 12-month period for financial instruments that have not observed a significant increase in credit risk since initial recognition ("stage 1") or over a lifetime period for financial instruments that have observed a significant increase in credit risk since initial recognition ("stage 2"). The allowance also adopts lifetime ECLs for financial instruments where there is objective evidence of credit-impairment at the reporting date ("stage 3"). In determining the appropriate stage for a financial instrument, the Company applies the definition of default consistent with the Basel definition of default to maintain uniformity of the definition across the Firm.

The stage determination for credit losses under the ECL model is dependent on the measurement of a significant increase in credit risk ("SICR"). In determining SICR, the Company plans to conduct quantitative tests taking into consideration, but not limited to, existing risk management indicators, credit rating changes and reasonable and supportable forward-looking information, the latter consisting of a range of scenarios incorporating macro-economic factors composed and monitored by an internal specialised economic forecasting team.

The key input components for the quantification of expected loss through the ECL model includes the probability of default ("PD"), loss given default ("LGD") and exposure at default ("EAD"). The Company seeks to efficiently and effectively leverage as much as possible from existing regulatory and capital frameworks where overlap is present for the implementation of IFRS 9. Differences observed between content in existing frameworks and requirements under IFRS 9 have been identified and are adjusted accordingly. The inputs to the ECL model capture historical datasets and a reasonable and supportable forecasting horizon to estimate expected credit losses.

3. Accounting and reporting developments (continued)

New standards, amendments and interpretations not yet adopted (continued)

IFRS 9 'Financial instruments' ("IFRS 9") (continued)

Expected impact

Based on 31 December 2017 data, the Company estimates the adoption of the IFRS 9 impairment requirements to result in an immaterial impact on retained earnings. The degree to which the allowance for credit losses will change will depend on both the forward-looking information used on the day of implementation as well as the Company's portfolio composition. Based on 31 December 2017 data, the Company also estimates the adoption of the classification and measurement requirements in IFRS 9 to result in an immaterial impact to retained earnings and other reserves.

For the financial statements for the year ended 31 December 2018, the Company will provide reconciliations and illustrative transition disclosures between IAS 39 and IFRS 9 where required, however the Company will not restate prior periods.

IFRS 15 'Revenue from Contracts with Customers' ("IFRS 15")

IFRS 15 was released in May 2014 by the IASB. This standard requires that revenue from contracts with customers be recognised upon transfer of control of a good or service in the amount of consideration expected to be received. IFRS 15 also changes the accounting for certain contract costs, including whether they may be offset against revenue in the income statement, and requires additional disclosures about revenue and contract costs. IFRS 15 may be adopted using a full retrospective approach or a modified, cumulative effect approach wherein the guidance is applied only to existing contracts as of the date of initial application, and to new contracts transacted after that date. IFRS 15 is applicable retrospectively and must be applied in an entity's first annual IFRS financial statements for periods beginning on or after 1 January 2018. The Company has adopted the new standard on 1 January 2018, using the full retrospective method of adoption, where applicable.

Implementation programme

The Company's implementation efforts included the identification of revenue and associated costs within the scope of the guidance, as well as the evaluation of revenue contracts, and any changes to existing revenue recognition policies. The Company did not identify any material changes in the timing of revenue recognition or presentation of revenues and expenses.

4. Critical accounting estimates and judgements

The preparation of financial statements requires management to make judgements, estimates and assumptions that affect the amounts recognised in the financial statements. The nature of estimation means that actual outcomes could differ from those estimates. The following judgements have had the most significant effect on amounts recognised in the financial statements:

Fair value measurement

The Company carries a significant portion of its assets and liabilities at fair value on a recurring basis. Estimating fair value often requires the application of judgement. The type and level of judgement required is largely dependent on the amount of observable market information available to the Company. For instruments valued using internally developed models that use significant unobservable inputs that are classified within level 3 of the valuation hierarchy, judgements used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs - including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see note 28.

For instruments classified in levels 2 and 3, management judgement must be applied to assess the appropriate level of valuation adjustments, the Company's credit-worthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the net open risk position. The judgements made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. For further discussion of valuation adjustments applied by the Company, see note 28.

The use of methodologies or assumptions different than those used by the Company could result in a different estimate of fair value at the reporting date. For a detailed discussion of the Company's valuation process and hierarchy, its determination of fair value for individual financial instruments, and the potential impact of using reasonable possible alternative assumptions for the valuations, see note 28.

5. Significant accounting policies

The following are principal accounting policies applied in the preparation of these financial statements. These policies have been applied consistently to all the years presented, unless otherwise stated.

5.1 Consolidation

The Company is a subsidiary undertaking of J.P. Morgan Capital Holdings Limited, a company incorporated in England and Wales and of its ultimate parent, JPMorgan Chase & Co. a company incorporated in the United States of America. It is included in the consolidated financial statements of JPMorgan Chase & Co. which are publicly available. Therefore, the Company has elected not to prepare group financial statements in accordance with the dispensation set out in Section 401 of the Companies Act 2006.

5.2 Functional and presentation currency

Items included in the financial statements of the Company are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). Taking into account the cash flows, the financing structure, including United States ("U.S") dollar equity and inter-entity financing arrangements with JPMorgan Chase Bank N.A., U.S. dollars is considered as the functional and presentation currency of the Company.

5.3 Foreign currency translation

Monetary assets and monetary liabilities in foreign currencies are translated into U.S. dollars at rates of exchange ruling on the balance sheet date. Income and expense items denominated in foreign currencies are translated into U.S. dollars at exchange rates prevailing at the date of the transactions. Any gains or losses arising on translation are taken directly to the income statement.

Non-monetary items denominated in foreign currencies that are stated at historical cost are translated into U.S. dollars at the exchange rate ruling at the date of the transaction.

Non-monetary items denominated in foreign currencies that are stated at fair value are translated into U.S. dollars at foreign exchange rates ruling at the dates when the fair values were determined. Translation differences arising on non-monetary items measured at fair value are recognised in the income statement except for differences arising on available-for-sale non-monetary financial assets, which are included in the financial assets available-for-sale reserve.

5.4 Income and expense recognition

Interest income and expense are recognised on an effective interest rate basis, refer note 7. Interest generated as a result of 'negative' interest rates is recognised gross, as interest income or interest expense. All contractual terms of a financial instrument are considered when estimating future cash flows.

Fees and commissions are recognised when the underlying contract becomes legally binding or at the agreed due date if later. Investment banking fees include advisory and underwriting fees. Advisory fees are recognised when the related services have been performed and the fee has been earned. Underwriting fees are recognised when the Company has rendered all services and is entitled to collect the fee, and there are no other contingencies associated with the fee.

Profits and losses resulting from the purchase and sale of securities and the revaluation of financial instruments are recognised as trading gains or losses on a trade-date basis, including related transaction costs but excluding the associated interest.

5.5 Dividend recognition

Dividend income is recognised when the right to receive payment is established. Dividends in the form of non-cash assets are recognised at their fair values by the transferee and derecognised at their book value by the transferor. Where the asset received is an investment in the share capital of an entity, the fair value is determined by the market value of the underlying net assets and businesses of the investee, unless the transaction is a combination of businesses under common control where predecessor accounting is applied (refer note 5.16).

Dividend distributions are recognised in the period in which they are declared and approved.

5. Significant accounting policies (continued)

5.6 Financial assets and financial liabilities

The Company classifies its financial assets and financial liabilities in the following categories on initial recognition: financial assets and financial liabilities held for trading, financial assets and financial liabilities designated at fair value through profit or loss, and loans and receivables and financial liabilities held at amortised cost. The Company recognises derivatives on its balance sheet when it becomes a party to the contractual provisions of the instruments. Loans and receivables and financial liabilities at amortised cost are recognised when the Company becomes a party to the contractual provisions of the instrument. Regular way purchases and sales of financial assets are recognised on the trade-date, the date on which the Company commits to purchase or sell the asset.

i. Financial assets and financial liabilities held for trading

The Company considers a financial asset or financial liability as held for trading if it is acquired or incurred principally for the purpose of selling or repurchasing it in the near term, or forms part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking or it is a derivative.

Financial assets and financial liabilities held for trading comprise both debt and equity securities, loans and derivatives. These instruments are either held for trading purposes or used for hedging certain assets, liabilities, positions, cash flows or anticipated transactions. Included in financial assets held for trading and financial liabilities held for trading, are unrealised trading gains and losses. Financial instruments held for trading are initially recognised at fair value in the balance sheet with transaction costs being recorded in profit or loss and any gains or losses are taken directly to the income statement. Subsequently, they are measured at fair value with movement included in trading profit and loss.

The Firm manages cash instruments, in the form of debt and equity securities, and derivatives on a unified basis as part of the trading strategy, including hedging relationships between cash securities and derivatives. Accordingly the Firm reports the gains and losses on the cash instruments and the gains and losses on the derivatives on a net basis in trading profits.

ii. Financial assets and financial liabilities designated at fair value through profit or loss

Financial assets and financial liabilities that the Company designates on initial recognition as being at fair value through profit or loss are recognised at fair value, with transaction costs being recognised in profit or loss and subsequently measured at fair value. Gains and losses on financial assets and financial liabilities that are designated at fair value through profit or loss are recognised in profit or loss as they arise. A financial instrument may only be designated at inception as held at fair value through profit or loss and cannot subsequently be reclassified.

Financial assets or financial liabilities are designated at fair value through profit or loss only if such designation (a) eliminates or significantly reduces a measurement or recognition inconsistency; or (b) applies to a group of financial assets, financial liabilities or both that the Company manages and evaluates on a fair value basis; or (c) relates to an instrument that contains an embedded derivative unless the embedded derivative does not significantly modify the cash flows required by the contract or when a similar hybrid instrument is considered that separation of the embedded derivative is prohibited.

The Company has designated certain equity securities and wholesale loans at fair value through profit or loss on the basis that they are managed and their performance evaluated on a fair value basis.

iii. Loans and receivables and financial liabilities at amortised cost

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market except those that are classified as held for trading or designated at fair value through profit or loss. Loans and receivables include loans and advances to banks, loans and advances to customers and debtors

Loans and receivables are initially recognised at fair value including directly related incremental transaction costs. They are subsequently measured at amortised cost, including any provision for impairment losses. Interest is recognised in the income statement as 'Interest and similar income' using the effective interest rate method (see below).

Financial liabilities include trade creditors and borrowings and are recognised initially at fair value including directly related incremental transaction costs and subsequently measured at amortised cost using the effective interest method (see below).

The effective interest method is used to calculate the amortised cost of a financial asset or financial liability (or a group of financial assets or financial liabilities). It is a method of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial asset or financial liability or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. The effective interest rate is established on initial recognition of the financial asset or financial liability. The calculation of the effective interest rate includes all fees and commissions paid or received, transaction costs, and discounts or premiums that are an integral part of the effective interest rate. Transaction costs are incremental costs that are directly attributable to the acquisition, issue or disposal of a financial asset or financial liability.

5. Significant accounting policies (continued)

5.7 Fair value

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Fair values are determined by reference to observable market prices where available and reliable. Fair values of financial assets and financial liabilities are based on quoted market prices or dealer price quotations for financial instruments traded in active markets. Where market prices are unavailable, fair value is based on valuation models that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value.

For financial assets and liabilities held at fair value, most market parameters in the valuation model are either directly observable or are implied from instrument prices. When input values do not directly correspond to the most actively traded market parameters the model may perform numerical procedures in the pricing such as interpolation.

The Company classifies its assets and liabilities according to a hierarchy that has been established under IFRS for disclosure of fair value measurements. The fair value hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1) and the lowest priority to unobservable inputs (level 3 inputs).

A financial instrument's categorisation within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement.

Further details on fair value measurements are provided in note 28 to the financial statements.

5.8 Recognition of deferred day one profit and loss

The Company enters into transactions where fair value is determined using valuation models for which not all inputs are market observable prices or rates. Such a financial instrument is initially recognised at the transaction price, although the value obtained from the relevant valuation model may differ. The difference between the transaction price and the model value, commonly referred to as 'day one profit and loss', is not recognised immediately in the income statement when based on unobservable inputs.

The timing of recognition of deferred day one profit and loss is determined for each class of financial asset and liability. It is either amortised over the life of the transaction, deferred until the instrument's fair value can be determined using market observable inputs, or realised through settlement. The financial instrument is subsequently measured at fair value, adjusted for the deferred day one profit and loss.

5.9 Derecognition of financial assets and financial liabilities

Financial assets are derecognised when the contractual right to receive cash flows from the asset has expired, or has been transferred with either of the following conditions met:

a) the Company has transferred substantially all the risks and rewards of ownership of the asset; or

b) the Company has neither retained nor transferred substantially all of the risks and rewards; but has relinquished control of the asset.

Financial liabilities are derecognised when they are extinguished, that is when the obligation is discharged, cancelled or expires.

The Company also from time to time enters into certain 'pass-through' arrangements whereby contractual cash flows on a financial asset are passed to a third party. Such financial assets are derecognised from the balance sheet if the terms of the arrangement oblige the Company to only pass on contractual cash flows to the third party that are actually received without material delay, and where the terms of the arrangement also prohibit the Company from selling or pledging the underlying financial asset.

5.10 Impairment of financial assets

The Company assesses at each balance sheet date whether there is any objective evidence that a financial asset or portfolio of financial assets is impaired. A financial asset or portfolio of financial assets is deemed to be impaired if, and only if, there is objective evidence of impairment as a result of one or more events that has occurred after the initial recognition of the asset and that event (or events) has an adverse impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

5. Significant accounting policies (continued)

5.10 Impairment of financial assets (continued)

Impairment losses on loans and receivables are measured as the difference between the financial asset's carrying amount and the present value of the estimated future cash flows discounted at the financial asset's effective interest rate. The loss is recognised in the income statement against the carrying amount of the impaired asset on the balance sheet. Interest continues to be accrued on the reduced carrying amount based on the original effective interest rate of the financial asset.

Specific provisions are raised against loans and receivables when the Company considers that the credit worthiness of the borrower has deteriorated such that the recovery of the whole or part of an outstanding advance is in serious doubt.

Impairment provisions are also raised to cover losses which, although not specifically identified, are known from experience to have occurred in the portfolio of loans and receivables at the balance sheet date. These provisions are adjusted on a monthly basis by an appropriate charge or reversal of the provision following an assessment of the loans and receivables portfolio.

Impairment provisions are determined by modelling the current exposure, taking into account such factors as duration and probabilities of default.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss shall be reversed in the income statement. The amount of reversal shall not result in a carrying amount of the financial asset that exceeds what the amortised cost would have been had the impairment not been recognised at the date the impairment is reversed.

5.11 Impairment of non-financial assets

Non-financial assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are largely independent cash inflows (cash-generating units). Prior impairments of non-financial assets (other than goodwill) are reviewed for possible reversal at each reporting date.

5.12 Securities purchased under agreement to resell and securities sold under agreement to repurchase

Securities purchased under agreements to resell the securities to the counterparty, and securities sold under agreements to repurchase, are treated as collateralised lending and borrowing transactions respectively. The consideration for the transaction can be in the form of cash or securities. If the consideration for the purchase or sale of securities is given in cash the transaction is recorded on the balance sheet within securities purchased/sold under agreement to resell/repurchase. If the consideration is received or given in the form of securities the transaction is recorded off balance sheet. The difference between the sales and repurchase price is treated as interest and accrued over the life of the agreements using the effective interest method.

5.13 Securities borrowed and securities loaned transactions

Securities borrowed and securities loaned are recorded at the amount of cash collateral advanced or received. Securities borrowed and securities loaned transactions require the borrower to deposit cash, letters of credit or other collateral with the lender. If the consideration is received or given in the form of securities the transaction is recorded off balance sheet. Fees received or paid in connection with securities borrowed and loaned are treated as interest income or interest expense and accrued over the life of the transaction using the effective interest rate method.

5.14 Offsetting financial assets and liabilities

Financial assets and financial liabilities are offset and the net amount reported in the balance sheet when there is currently a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or to realise the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Company or the counterparty.

5.15 Investments in JPMorgan Chase undertakings

Investments in JPMorgan Chase undertakings are stated at cost less impairment. Where the investments in the share capital of JPMorgan Chase undertakings are acquired by way of a dividend in kind, these are initially recognised at fair value, unless the transaction is a combination of business under common control where predecessor accounting is applied (refer note 5.16). Investments in JPMorgan Chase undertakings are subsequently measured at cost less provision for impairment.

5. Significant accounting policies (continued)

5.16 Business combinations

i. Combination of businesses

Business combinations are accounted for by applying the acquisition method of accounting.

The cost of a business combination is the fair value of the consideration given, liabilities incurred or assumed and of equity instruments issued plus the costs directly attributable to the business combination. Where control is achieved in stages, the cost is the consideration at the date of each transaction.

On acquisition of a business, fair values are attributed to the identifiable assets, liabilities and contingent liabilities unless the fair value cannot be measured reliably, in which case the value is incorporated in goodwill. Where the fair value of contingent liabilities cannot be reliably measured they are disclosed on the same basis as other contingent liabilities.

Goodwill recognised represents the excess of the fair value and the directly attributable costs of the purchase consideration over the fair values to the Firm's interest in the identifiable net assets, liabilities and contingent liabilities acquired.

ii. Combination of businesses under common control

Predecessor accounting is applied to transfers of businesses between entities under common control, where all combining entities are controlled by the same entity before and after the business acquisition. Assets and liabilities are recognised at their predecessor carrying amounts (i.e. the carrying amounts of assets and liabilities in the books and records of the transferor prior to the transfer) with no fair value adjustments. Any difference between the cost of acquisition and aggregate book value of the assets and liabilities on the date of transfer of the acquired entity is recognised as an adjustment to equity. As a result, no goodwill is recognised from the business combination.

5.17 Cash and cash equivalents

Cash and cash equivalents include cash and balances at central banks and loans and advances to banks with maturities of three months or less.

5.18 Current and deferred income tax

Income tax payable on taxable profits (current tax) is recognised as an expense in the period in which the profits arise. Income tax recoverable on tax allowable losses is recognised as a current tax asset only to the extent that it is regarded as recoverable by offset against taxable profits arising in the current or prior period. Current tax is measured using tax rates and tax laws that have been enacted or substantively enacted at the balance sheet date.

Deferred tax is provided in full, using the liability method, on temporary differences arising from the differences between the tax bases of assets and liabilities and their carrying amounts in the financial statements. Deferred tax is determined using tax rates and legislation enacted or substantively enacted by the balance sheet date, which are expected to apply when the deferred tax asset is realised or the deferred tax liability is settled. Deferred tax assets and liabilities are only offset when there is both a legal right and an intention to settle on a net basis. Current tax and deferred tax are recognised directly in equity if the tax relates to items that are recognised in the same or a different period in equity.

5.19 Provisions and contingent liabilities

Provisions are recognised when the Company has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made.

A contingent liability is a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one of more uncertain future events not wholly within the control of the Company, or a present obligation that arises from past events but is not recognised because either an outflow of economic benefits is not probable or the amount of the obligation cannot be reliably measured. Contingent liabilities are not recognised in the financial statements; however disclosure is made unless the probability of settlement is remote.

5. Significant accounting policies (continued)

5.20 Pensions and other post-retirement benefits

The Company operates both defined benefit and defined contribution schemes for its employees. The Company also operates defined benefit and defined contribution schemes for employees in the European branches.

i. Defined contribution scheme

A defined contribution plan is a pension plan under which the Company pays fixed contributions into a separate entity. The Company has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. Obligations for contributions to defined contribution pension plans are recognised as an expense and charged to the income statement on an accrual basis.

ii. Defined benefit scheme

For defined benefit schemes, the service cost of providing retirement benefits to employees during the year is charged to the income statement in accordance with IAS 19 'Employee benefits'. The pension costs are assessed based on the advice of qualified actuaries so as to recognise the full cost of provision of contracted pension benefits over the period of employees' service lives.

The defined benefit schemes' liabilities are measured on an actuarial basis and scheme assets measured at their fair values separately for each plan. Any surplus or deficit of scheme assets over liabilities is recognised on the balance sheet as an asset (surplus) or liability (deficit). The current service cost and any past service costs together with the expected return on scheme assets less the unwinding of discount on the scheme liabilities is charged to the income statement. Actuarial gains and losses are recognised in full in the period in which they occur in other comprehensive income and presented in equity in the period in which they occur.

5.21 Share-based payment awards

Share-based payment awards may be made to employees of the Company under the Firm's incentive awards schemes. The fair value of any such shares, rights to shares or share options is measured when the conditional award is made. This value is recognised as the compensation expense to the Company over the period to which the performance criteria relate together with employer's social security expenses or other payroll taxes. All of the awards granted are equity settled. The Company estimates the level of forfeitures and applies this forfeiture rate at the grant date.

Additionally, the conditions that must be satisfied before an employee becomes entitled to equity instruments under the Firm's incentive programs is taken into consideration. The Firm's Retirement Eligibility rules for restricted stock awarded as part of incentive programs require the acceleration of the amortisation of the award such that the award is fully expensed at the time the retirement eligibility comes into force.

6. Segmental analysis

The Company is not in scope of IFRS 8 'Operating segments' and therefore has not provided any segmental analysis. The Company has one class of business, the provision of international Corporate and Investment Banking services within Europe, the Middle East and Africa ("EMEA"). The Company operates six branches outside of the UK, but these do not generate material revenues.

J.P. MORGAN SECURITIES PLC
Notes to the financial statements (continued)

7. Net interest income and interest expense

Interest income and interest expense includes the current-period interest accruals within interest income or interest expense, as applicable.

Details of interest income and interest expense were as follows:

	2017	2016
	$'000	**$'000**
Net interest income/(expense)		
Financial assets and liabilities held for trading	850,553	472,739
Securities purchased under agreements to resell and securities sold under agreements to repurchase	730,117	400,577
Securities borrowed and securities loaned	(281,976)	(275,811)
Other interest income and expense*	(522,733)	(5,923)
Net interest income	**775,961**	**591,582**

* Other interest includes interest income on loans and advances to customers and interest expense on borrowings from JPMorgan Chase undertakings.

Net interest income for the year ended 31 December 2017 includes $864 million income and $1,349 million expense from and to JPMorgan Chase undertakings (2016: $413 million income, $497 million expense).

In 2016, an amount of $317 million included within interest and similar income, representing 'negative' interest income, has been reclassified to interest expense and similar charges and an amount of $306 million included within interest expense and similar charges, representing 'negative' interest expense, has been reclassified to interest and similar income. These amounts have been reclassified to correctly reflect the nature of the balance.

8. Impairment

	2017	2016
	$'000	**$'000**
Write down of investments in JPMorgan Chase undertakings		
Opening balance as at 1 January	**117,359**	—
Increase during the year	—	117,359
Closing balance as at 31 December	**117,359**	117,359
Allowance for loan losses		
Opening balance as at 1 January	**2,733**	2,733
Increase/(decrease) during the year	**127,251**	—
Impairment write off	**(28,789)**	—
Closing balance as at 31 December	**101,195**	2,733
Allowance for lending-related commitments		
Opening balance as at 1 January	**380**	380
Increase during the year	**20,226**	—
Closing balance as at 31 December	**20,606**	380
Net impairment increase	**147,477**	117,359

9. Directors' emoluments

	2017	2016
	$'000	$'000
Emoluments	1,475	4,461
Total contributions to a defined contribution plan	9	14
Total value of long term incentive plans for all directors	27	3,784
Compensation to non-executive directors	773	851
Number of directors who exercised share options	2	4
Number of directors with shares received or receivable under LTIPs	1	2
Number of directors to whom defined contribution pension rights accrued	4	5

In accordance with the Companies Act 2006, the directors' emoluments above represent the proportion paid or payable in respect of qualifying services to the Company only. Directors also received emoluments for non-qualifying services, which are not required to be disclosed.

Highest paid director

The emoluments (excluding amounts paid or due to directors under long-term incentive plans ("LTIP's") and the value of share options granted or exercised by directors) of the highest paid director were $668,860 (2016: $3,091,725).

The contribution to the defined contribution scheme for the highest paid director during 2017 was $7,630 (2016: $5,101). The highest paid director did not exercise share options during the year (the highest paid director exercised share options in 2016). During the year, no shares were received or are receivable by the highest paid director under long-term incentive plans (shares were received or receivable by the highest paid director under long term incentive plans during 2016).

10. Profit on ordinary activities before taxation

	2017	2016
	$'000	$'000
Profit on ordinary activities before taxation is stated after charging:		
Depreciation of tangible fixed assets	1,760	1,290
Auditors' remuneration for the audit of the Company's annual financial statements	2,874	2,468
Audit-related assurance services	2,168	849
Wages and salaries	882,633	733,942
Social security costs	215,222	138,753
Other pension and benefits costs	66,270	59,262
Share-based awards	309,688	249,203

The average monthly number of persons providing services to the Company during the year was 1,959 (2016: 1,586). The average monthly number of staff employed by the European branches during the year was 241 (2016: 138).

11. Tax on profit on ordinary activities

(a) Analysis of tax charge for the year	2017 $'000	2016 $'000
Current taxation		
UK Corporation tax on profit for the year	960,531	831,585
Overseas taxation	322,719	169,405
Less: Double tax relief	(289,736)	(180,277)
Adjustments in respect of previous years	(61,266)	25,385
Current tax expense for the year	932,248	846,098
Deferred tax (note 12):		
Origination and reversal of temporary differences	14,825	8,137
Adjustment in respect of previous year	19,341	(11,844)
Effect of rate change on opening balance	(2,824)	(582)
Deferred tax credit for the year	31,342	(4,289)
Total tax expense for the year	963,590	841,809

(b) Factors affecting the current tax charge for the year

The current tax charge for the year differs from the standard rate of corporation tax in the UK including banking surcharge (27.25%). The differences are explained below:

	2017 $'000	2016 $'000
Profit on ordinary activities before taxation	3,599,049	3,987,453
Profit on ordinary activities before taxation multiplied by standard rate of corporation tax in UK of 27.25% (2016: 28%).	980,741	1,116,487
Effects of:		
Non-deductible expenses	9,101	77,817
Income not taxable	(14,827)	(52,792)
Dividend income	—	(168,000)
Transfer pricing adjustments	18,233	10,381
Other adjustment	—	2,577
Adjustments in respect of previous years	(41,924)	13,541
Group relief claimed for nil consideration	(25,956)	(146,748)
Foreign taxation suffered	32,983	(10,873)
Impact of change in rate on deferred tax	5,239	(581)
Total tax expense for the year	963,590	841,809

12. Deferred tax

The analysis of deferred tax assets and deferred tax liabilities is as follows:

	2017	2016
	$'000	$'000
Deferred tax assets:		
Deferred tax assets to be recovered after more than 12 months	104,605	96,747
Deferred tax asset to be recovered within 12 months	40,300	48,373
	144,905	145,120
Deferred tax liabilities:		
Deferred tax liability to be reversed after more than 12 months	(39,075)	(8,213)
Deferred tax liability to be reversed within 12 months	(1,196)	(1,173)
Deferred tax asset (net)	104,634	135,734

The gross movement on the deferred income tax account is as follows:

	2017	2016
	$'000	$'000
As at 1 January	135,734	94,590
Depreciation in excess of capital allowances	(167)	(576)
Deferral of share-based payments	7,790	24,152
Other adjustment	(38,723)	17,568
As at 31 December	104,634	135,734

The movement in deferred income tax assets and liabilities during the year, without taking into consideration the offsetting of balances within the same tax jurisdiction, is as follows:

Deferred tax asset	**Accelerated capital allowances**	**Share-based payments**	**Other**	**Total**
	$'000	$'000	$'000	$'000
At 1 January 2016	3,643	81,173	9,774	94,590
(Charged)/credited to the income statement	(576)	6,475	(1,610)	4,289
Credited directly to equity	—	17,677	270	17,947
Credited directly to other comprehensive income	—	—	18,908	18,908
At 31 December 2016	3,067	105,325	27,342	135,734
(Charged)/credited to the income statement	(167)	(3,801)	(27,374)	(31,342)
Credited directly to equity	—	11,591	—	11,591
Credited directly to other comprehensive income	—	—	(11,349)	(11,349)
At 31 December 2017	2,900	113,115	(11,381)	104,634

13. Loans and advances to banks

	2017	2016
	$'000	$'000
Loans and advances to banks	9,812,066	6,123,936

Included within loans and advances to banks is $7.1 billion (2016: $4.3 billion) held with JPMorgan Chase undertakings.

The Company maintains certain client money balances which principally arise where it acts on behalf of its clients as a clearing member for derivatives that are cleared through central counterparties. The Company has considered its rights and obligations relating to funds belonging to clients that are held subject to client money protection under the Client Assets Sourcebook, with banks, exchanges and clearing houses, and concluded that such amounts should not be recognised on balance sheet. Therefore, client money assets amounting to $13.9 billion (2016: $12.5 billion) have been derecognised from the Company's balance sheet, $7.0 billion (2016: $4.5 billion) from loans and advances to banks and $7.2 billion (2016: $8.0 billion) from debtors respectively.

14. Loans and advances to customers

The Company's loan portfolio is within the wholesale loan segment. Wholesale loans include loans made to a variety of customers, such as large corporates and institutional clients.

	2017	2016
	$'000	$'000
Loans and advances to customers	2,713,517	3,102,786
Provision for impairment	(129,984)	(2,733)
Impairment write off	28,789	—
	2,612,322	3,100,053

The credit quality and analysis of concentration of loans and advances to customers is managed within the Firm's Credit Risk Management function, refer to the Strategic report.

15. Securities financing activities

JPMS plc enters into resale agreements, repurchase agreements, securities borrowed and securities loaned transactions (collectively, "securities financing agreements") primarily to finance the Company's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Securities purchased and securities sold under agreements to resell/repurchase and securities borrowed and securities loaned transactions are generally carried at the amount of cash collateral advanced or received.

Secured financing transactions expose the Company to credit and liquidity risk. To manage these risks, the Company monitors the value of the underlying securities (predominantly high-quality securities collateral, including government-issued debt and agency mortgage-backed securities) that it has received from or provided to its counterparties compared to the value of cash proceeds and exchanged collateral, and either requests additional collateral or returns securities or collateral when appropriate. Margin levels are initially established based upon the counterparty, the type of underlying securities, and the permissible collateral, and are monitored on an ongoing basis.

In resale agreements and securities borrowed transactions, the Company is exposed to credit risk to the extent that the value of the securities received is less than initial cash principal advanced and any collateral amounts exchanged. In repurchase agreements and securities loaned transactions, credit risk exposure arises to the extent that the value of underlying securities exceeds the value of the initial cash principal advanced, and any collateral amounts exchanged.

Additionally, the Company typically enters into master netting agreements and other similar arrangements with its counterparties, which provide for the right to liquidate the underlying securities and any collateral amounts exchanged in the event of a counterparty default. It is also the Company's policy to take possession, where possible, of the securities underlying resale agreements and securities borrowed transactions.

Refer to note 29 for additional information on netting arrangements.

15. Securities financing activities (continued)

	2017	2016
	$'000	$'000
Securities purchased under agreements to resell	135,385,611	130,416,852
Securities borrowed	27,072,599	25,831,106
	162,458,210	156,247,958
Securities sold under agreements to repurchase	74,937,158	61,657,271
Securities loaned	12,550,040	20,133,325
	87,487,198	81,790,596

Securities financing transaction balances include the following amounts held with other JPMorgan Chase undertakings:

	2017	2016
	$'000	$'000
Securities purchased under agreements to resell	42,694,037	41,017,708
Securities borrowed	11,761,045	20,449,114
	54,455,082	61,466,822
Securities sold under agreements to repurchase	13,909,031	12,366,287
Securities loaned	10,007,640	18,205,412
	23,916,671	30,571,699

16. Financial assets held for trading

Within its client-driven market-making activities, the Company transacts in debt and equity instruments and derivatives.

	2017	2016
	$'000	$'000
Debt and equity instruments	107,884,895	89,327,429
Derivative receivables	232,373,718	233,718,379
	340,258,613	323,045,808

Financial assets held for trading includes $122 billion held with JPMorgan Chase undertakings (2016:$124.9 billion).

17. Financial assets designated at fair value through profit or loss

	2017	2016
	$'000	$'000
Equity instruments	164,384	144,728
Loans	177,218	170,931
	341,602	315,659

18. Debtors

	2017	2016
	$'000	$'000
Trade debtors	30,394,066	22,534,256
Other debtors	49,252,556	33,938,769
	79,646,622	56,473,025

Trade debtors mainly consists of unsettled trades. Other debtors includes $45.9 billion of cash collateral provided on derivatives (2016: $33.5 billion).

Debtors includes the following balances from JPMorgan Chase undertakings:

	2017	2016
	$'000	$'000
Trade debtors	13,952,580	10,641,074
Other debtors	29,329,759	14,189,512
	43,282,339	24,830,586

Trade debtors mainly consists of accounts receivable from JPMorgan Chase undertakings and unsettled trades. Other debtors includes $29 billion of cash collateral provided on derivatives (2016: $14.1 billion).

19. Other assets

	2017	2016
	$'000	$'000
Deferred taxation	104,634	135,734
Prepayments	5,427	508
Accrued income	652,028	447,989
	762,089	584,231

20. Investments in JPMorgan Chase undertakings

	2017	2016
	$'000	$'000
Investments in JPMorgan Chase undertakings at cost		
At 1 January	3,341,207	3,458,789
Write down - see below	—	(117,359)
Realisation of investments - see below	—	(223)
At 31 December	3,341,207	3,341,207

In the prior year, on review of the carrying amount of the Company's investment in Cazenove Group Limited, the investment has been written down by $117.4 million.

During the first quarter of 2016, the Company received a final cash distribution of $517,000 from its subsidiary, Bank One Europe Limited, of which $294,000 was recognised as a gain on disposal in the Income statement. Bank One Europe Limited was dissolved shortly thereafter.

20. Investments in JPMorgan Chase undertakings (continued)

The holdings of the Company are as follows:

Name	Address of subsidiary	Principal activity	Holding	Shares held %
Greenwood Nominees Limited	25 Bank Street, Canary Wharf, London, E14 5JP, England	Nominee company	Direct	100
J.P. Morgan Europe Limited	25 Bank Street, Canary Wharf, London, E14 5JP, England	Banking	Direct	100
Cazenove Group Limited	JPMorgan House, Grenville Street, St. Helier, JE4 8QH, Jersey	Holding company	Direct	100
J.P. Morgan Prime Nominees Ltd.	25 Bank Street, Canary Wharf, London, E14 5JP, England	Nominee company	Direct	100
J.P. Morgan Services LLP	25 Bank Street, Canary Wharf, London, E14 5JP, England	Dormant company	Direct	57
CP Group Holding Cooperatief U.A.	Strawinskylaan 1135, Tower B, 11th Floor, Amsterdam, 1077, Netherlands	Investment company	Direct	100
Chase Securities International Limited	25 Bank Street, Canary Wharf, London, E14 5JP, England	Investment company	Indirect	100
Chase International Securities (C.I.) Limited	Forum 4, Grenville Street, St. Helier, JE2 4UF, Jersey	Investment company	Indirect	100
Chemical Nominees Limited	25 Bank Street, Canary Wharf, London, E14 5JP, England	Investment company	Indirect	100
Cazenove Holdings Limited	JPMorgan House, Grenville Street, St. Helier, JE4 8QH, Jersey	Holding company	Indirect	100
Cazenove IP Limited	25 Bank Street, Canary Wharf, London, E14 5JP, England	Investment company	Indirect	100
JPMorgan Cazenove Holdings	25 Bank Street, Canary Wharf, London, E14 5JP, England	Holding company	Indirect	51
J.P. Morgan Cazenove Limited	25 Bank Street, Canary Wharf, London, E14 5JP, England	Investment company	Indirect	51
JPMorgan Cazenove Service Company	25 Bank Street, Canary Wharf, London, E14 5JP, England	Service company	Indirect	51
Cheyne Capital Guaranteed S.A. Series 2007-1[(a)]	2 Boulevard Konrad Adenauer, Luxembourg, L-1115, Luxembourg	Notes issuer	Direct	100

(a) The above entity is a special purpose entity which meets the definition (per section 1162 of the Companies Act 2006) of a subsidiary undertaking.

The above investments are shown at cost less any provision for impairment. In the opinion of the directors, the value of the Company's investment in each subsidiary undertaking is not less than the amount at which it is stated in the balance sheet.

All shares held in the above subsidiaries are ordinary shares.

21. Unconsolidated structured entities

Structured entities

A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as, when any voting rights relate to administrative tasks only and the relevant activities are directed by means of other contractual arrangements.

Typically, structured entities have one or more of the following characteristics:

- an insufficient amount of at-risk equity to permit the entity to finance its activities without additional subordinated financial support;
- equity at-risk owners that, as a group, are not able to make significant decisions relating to the entity's activities through voting rights or similar rights; or
- equity at-risk owners that do not absorb the entity's losses or receive the entity's residual returns.

The most common type of structured entities is a special purpose entity ("SPE"). SPE's are commonly used in securitisation transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The party that has power to direct the most significant activities of the entity and an exposure to the risks of the entity (together constituting control of the entity) is required to consolidate the assets and liabilities of the structured entity. The structured entities in which the Company has control are consolidated into the parent undertakings of the Company, as set out in note 20 to these financial statements.

The Company has involvement with various structured entities, originated within the Firm or by third parties. These typically include securitisations, credit protection purchased credit linked notes, collateralised loan and debt obligations, and other structured financings.

Material interests held in SPE's include residential and commercial mortgage-backed securities and other asset-backed securities. These interests relate to securitisation bonds where the underlying assets are residential and commercial mortgages, consumer loans, student loans, trade receivables, and credit card receivables.

Interest in unconsolidated structured entities

The Company's interest in an unconsolidated structured entity is considered as the contractual and non-contractual involvement that exposes the Company to variability of returns from the performance of the structured entity but not deemed a subsidiary.

The following table shows, by type of structured entity, the carrying amounts of the Company's interest in unconsolidated structured entities recognised on the balance sheet. The maximum exposure to loss is considered as approximate to the carrying amounts. It also provides an indication of the size of the structured entities, measured by the total assets held in the structured entity. The carrying amounts do not necessarily reflect the risks faced by the Company, as factors such as economic hedges and effect of collateral held by the Company are not included.

		Interest in unconsolidated structured entities			
	Fair value of assets held by SPE	Financial assets and liabilities held for trading	Loans and advances to customers	Other	Total
31 December 2017	**$'000**	**$'000**	**$'000**	**$'000**	**$'000**
Residential mortgage-backed securities	41,499,967	946,036	—	—	946,036
Commercial mortgage-backed securities	3,326,241	49,690	—	—	49,690
Other asset-backed securities	34,832,976	490,698	—	—	490,698
Credit-related notes and asset swap vehicles	73,776,415	255,094	—	—	255,094
Covered Bonds	122,148,567	75,266	—	—	75,266
Other	167,451,690	1,653,563	—	—	1,653,563
Total assets	443,035,856	3,470,347	—	—	3,470,347
Maximum exposure to loss	443,035,856	3,470,347	—	—	3,470,347
Total liabilities	—	533,309	—	—	533,309

21. Unconsolidated structured entities (continued)

		Interest in unconsolidated structured entities			
	Fair value of assets held by SPE	Financial assets and liabilities held for trading	Loans and advances to customers	Other	Total
31 December 2016	**$'000**	**$'000**	**$'000**	**$'000**	**$'000**
Residential mortgage-backed securities	128,093,000	750,000	—	—	750,000
Commercial mortgage-backed securities	21,654,000	95,000	365,000	—	460,000
Other asset-backed securities	27,923,000	174,000	50,000	—	224,000
Credit-related notes and asset swap vehicles	47,022,000	227,000	—	—	227,000
Collateralised debt obligations	6,883,000	101,000	—	—	101,000
Covered Bonds	394,504,000	171,000	—	—	171,000
Other	280,160,000	1,807,000	—	—	1,807,000
Total assets	906,239,000	3,325,000	415,000	—	3,740,000
Maximum exposure to loss	906,239,000	3,325,000	415,000	—	3,740,000
Total liabilities	—	—	—	52,000	52,000

22. Financial liabilities held for trading

	2017	2016
	$'000	$'000
Debt and equity instruments	46,215,803	42,248,042
Derivative payables	241,407,619	235,757,064
Other financial liabilities	20,664,646	15,520,640
	308,288,068	293,525,746

Financial liabilities held for trading includes $166 billion held with JPMorgan Chase undertakings (2016: $152.1 billion).

23. Trade creditors and other liabilities

	2017	2016
	$'000	$'000
Trade creditors [(a)]	30,479,035	29,755,510
Other liabilities:		
Accruals and deferred income	1,766,668	1,399,456
Taxation and social security [(b)]	311,635	575,237
Other [(c)]	25,271,893	23,844,456
Total other liabilities	27,350,196	25,819,149
Total trade creditors and other liabilities	57,829,231	55,574,659

(a) Trade creditors predominantly consists of unsettled trades, brokerage fees payable and liabilities in respect of assets transferred but not derecognised (note 32) and includes $3.5 billion with other JPMorgan Chase undertakings (2016: $2.6 billion). Amounts owed to JPMorgan Chase undertakings presented on the balance sheet represents financing and collateral arrangements with other JPMorgan Chase undertakings.

(b) Taxation and social security includes provisions for corporate tax, overseas tax and bank levy.

(c) Other includes $25.2 billion (2016: $23.5 billion) of cash collateral received related to OTC derivatives.

24. Called-up share capital

	2017	2016
	$'000	$'000
Issued and fully paid share capital		
At 1 January		
1,039,262 ordinary shares (2016: 1,039,262) of $10,000 each	10,392,620	10,392,620
34,648 preferred ordinary shares (2016: 34,648) of $10,000 each	346,480	346,480
680,685 preference shares (2016: 680,685) of $10,000 each	6,806,850	6,806,850
50,000 ordinary shares (2016: 50,000) of £1.24 each	100	100
2 ordinary shares (2016: 2) of £1 each	—	—
Movements during the year		
205,081 ordinary shares issued of $10,000 each	2,050,810	—
34,648 preferred ordinary shares (2016: 34,648) of $10,000 each	(346,480)	—
680,685 preference shares (2016: 680,685) of $10,000 each	(6,806,850)	—
At 31 December		
1,244,343 ordinary shares (2016: 1,039,262) of $10,000 each	12,443,430	10,392,620
0 preferred ordinary shares (2016: 34,648) of $10,000 each	—	346,480
0 preference shares (2016: 680,685) of $10,000 each	—	6,806,850
50,000 ordinary shares (2016: 50,000) of £1.24 each	100	100
2 ordinary shares (2016: 2) of £1 each	—	—
	12,443,530	17,546,050

	2017	2016
	$'000	$'000
Preference shares in issue		
5-year floating rate of $10,000 each*	—	2,650,000
10-year fixed rate of $10,000 each*	—	2,156,850
20-year fixed rate of $10,000 each*	—	2,000,000
	—	6,806,850

* Additional disclosure on the terms per tranche of preference shares and preferred ordinary shares is provided under note 25.

On 14 June 2017, the Company redeemed 3,648 preferred ordinary shares of $10,000 each and 7,000 preference shares $10,000 each comprising the entire shareholding of J.P. Morgan Capital Financing Limited; as a result the Company is wholly owned by J.P. Morgan Capital Holdings Limited.

Through a series of corporate steps that occurred instantaneously on 11 September 2017, 31,000 preferred ordinary shares and 673,685 preference shares of $10,000 each were converted into 205,081 ordinary shares of $10,000 each and 499,604 deferred shares of $10,000 each. The deferred shares had no voting rights or any rights to dividends or distributions and were cancelled immediately, resulting in recognition of $4,996 million in capital redemption reserve.

25. Dividends

As at 11 September 2017, the Company no longer had any preference shares or preferred ordinary shares in issue. Interim dividends of $359,303,501 were paid on the preference shares (2016: $358,107,690) and $6,696,499 on the preferred ordinary shares of the Company in 2017 (2016: $5,261,655). An interim dividend of nil (2016: $686,630,655) was paid on the ordinary shares of the Company for 2017. No final dividend was paid or proposed for 2017 (2016: nil).

The dividend rate on the preferred ordinary shares was 0.9% over 12 month U.S. dollar LIBOR on the nominal amount, and, if resolved to be distributed, was payable in priority to any dividend payable on ordinary shares, with no right to accumulation in the event of a deficiency of profits nor any further entitlement to participation in the profits of the Company. Subject to approval from the PRA, the Company could redeem at its option any preferred ordinary share at par, together with accrued dividend due, at any time after 26 March 2007. The preferred ordinary shares carried no voting rights at a general meeting of the Company. The ordinary shares carry 100% of the voting rights.

The dividend rate on the 5-year floating rate preference shares was 0.9% over 12 month U.S. dollar LIBOR on the nominal amount, and, if resolved to be distributed, was payable in priority to any dividend payable on ordinary shares, but pari passu to any payment to the holders of the preferred ordinary shares or any other preference shares, with no right to accumulation in the event of a deficiency of profits nor any further entitlement to participation in the profits of the Company. Subject to approval from the PRA, the Company could redeem at its option any 5-year floating rate preference share at par, together with accrued dividend due, at any time after 9 June 2009. The 5-year floating rate preference shares carried no voting rights at general meetings.

The dividend rate on the 10-year fixed rate preference shares was a fixed rate of 2.75% and 2.85% per series, above the 10-year U.S. Treasury Rate as at the date of issue, and, if resolved to be distributed, was payable in priority to any dividend payable on the ordinary shares, but pari passu to any payment to the holders of the preferred ordinary shares or any other preference shares, with no right to accumulation in the event of deficiency of profits nor any further entitlement to participation in the profits of the Company. Subject to approval from the PRA, the Company could redeem any series of the 10-year fixed rate preference shares at par at any time after the 10th anniversary of the date of issue of that series provided that the Company could only redeem exactly 20 per cent of the total number of preference shares issued in that series at par. The preference shares carried no voting rights at general meetings.

The dividend rate on the 20-year fixed rate preference shares was a fixed rate of 8% and, if resolved to be distributed, was payable in priority to any payment of dividend or other distribution to the holders of any junior obligations, but pari passu to any payment of dividend or other distribution to the holders of any parity obligations, with no right to accumulation in the event of deficiency of profits nor any further entitlement to participation in the profits of the Company. Subject to approval from the PRA, the Company could redeem at its option any 20-year fixed rate preference share at par, together with accrued dividend due, at any time after 20 years and one month of the date of issue of that series. The preference shares carried no voting rights at general meetings.

26. Notes to the statement of cash flows

	2017	2016
	$'000	$'000
Profit before income taxation	3,599,049	3,987,453
Adjustments for:		
Depreciation of tangible fixed assets	1,760	1,290
Impairment of investments in JPMorgan Chase undertakings	—	117,359
Other non-cash movements	(2,554,965)	681,129
Operating cash flows before changes in operating assets and liabilities	**1,045,844**	**4,787,231**
Changes in operating assets		
Decrease in loans and advances to customers	487,731	192,771
(Increase)/decrease in securities purchased under resale agreements	(4,968,759)	6,419,632
Increase in securities borrowed	(1,241,493)	(10,792,219)
Increase in financial assets held for trading	(17,212,805)	(23,437,986)
Increase in financial assets designated at fair value through profit or loss	(25,943)	(190,374)
Increase in debtors and other assets	(23,259,302)	(18,329,453)
(Increase)/decrease in prepayments and accrued income	(208,958)	38,987
	(46,429,529)	**(46,098,642)**
Changes in operating liabilities		
Increase/(decrease) in securities sold under repurchase agreements	13,279,887	(3,864,900)
(Decrease)/increase in securities loaned	(7,583,285)	8,817,628
Increase in financial liabilities held for trading	14,762,322	30,167,276
Increase in financial liabilities designated at fair value through profit or loss	1,465,247	—
Increase in trade creditors	723,525	4,269,179
Increase in other liabilities	1,453,703	6,128,016
Increase/(decrease) in accruals and deferred income	367,212	(741,444)
	24,468,611	**44,775,755**
Cash (used in)/generated from operating activities	**(20,915,074)**	**3,464,344**

27. Commitments

Lending-related commitments and guarantees

The Company provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Company should the counterparty draw upon the commitment or the Company be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Company's view, representative of its actual future credit exposure or funding requirements.

	2017	2016
	$'000	$'000
Unused commitments on loans	18,615,564	15,180,394
Standby letters of credit and guarantees	1,839,881	126,391
	20,455,445	15,306,785

There are no lending commitments to other JPMorgan Chase undertakings (2016: nil).

28. Assets and liabilities measured at fair value

Fair value

Valuation process

The Company carries a portion of its assets and liabilities at fair value on a recurring basis.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices or inputs, where available. If listed prices or quotes are not available, fair value is based on valuation models and other valuation techniques that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates, and credit curves.

The level of precision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Company believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgement and may vary across the Company's businesses and portfolios. The use of different methodologies or assumptions to those used by the Company could result in a different estimate of fair value at the reporting date.

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the balance sheet at fair value. The Firm's valuation control function, which is part of the Firm's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Company's positions are recorded at fair value. The valuation control function verifies fair value estimates provided by the risk-taking functions by leveraging independently derived prices, valuation inputs and other market data, where available.

In determining the fair value of a derivative portfolio, valuation adjustments may be appropriate to reflect the credit quality of the counterparty, the credit quality of the Company, and the funding risk inherent in certain derivatives. The credit and funding risks of the derivative portfolio are generally mitigated by arrangements provided to the Company by JPMorgan Chase Bank, N.A. and therefore the Company takes account of these arrangements in estimating the fair value of its derivative portfolio.

Valuation model review and approval

If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters. The Model Risk function is independent of the model owners and reviews and approves valuation models used by the Company.

Fair value hierarchy

The Company classifies its assets and liabilities according to a valuation hierarchy that reflects the observability of significant market inputs. The three levels are defined as follows:

Level 1 - inputs to the valuation methodology are quoted prices (unadjusted) 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 - one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorisation within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

J.P. MORGAN SECURITIES PLC
Notes to the financial statements (continued)

28. Assets and liabilities measured at fair value (continued)

Valuation methodologies

The following table describes the valuation methodologies used by the Company to measure its more significant products/ instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Equity, debt, and other securities	Quoted market prices are used where available.	Level 1
	In the absence of quoted market prices, securities are valued based on: • Observable market prices for similar securities • Relevant broker quotes • Discounted cash flows In addition, the following inputs to discounted cash flows are used for the following products: *Mortgage and asset-backed securities specific inputs*: • Collateral characteristics • Deal-specific payment and loss allocations • Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity	Level 2 or 3
Derivatives and fully funded OTC instruments	Exchange-traded derivatives that are actively traded and valued using the exchange price.	Level 1
	Derivatives that are valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models, that use observable or unobservable valuation inputs as well as considering the contractual terms. The key valuation inputs used will depend on the type of derivative and the nature of the underlying instruments and may include equity prices, commodity prices, interest rate yield curves, foreign exchange rates, volatilities, correlations, credit default swaps ("CDS") spreads and recovery rates. Additionally, the credit quality of the counterparty and of the Company as well as market funding levels may also be considered. In addition, the following specific inputs are used for the following derivatives that are valued based on models with significant unobservable inputs are as follows: *Structured credit derivatives specific inputs include*: • CDS spreads and recovery rates • Credit correlation between the underlying debt instruments *Equity option specific inputs include:* • Equity volatilities • Equity correlation • Equity - foreign exchange ("FX") correlation • Equity - interest rate correlation *Interest rate and FX exotic options specific inputs include:* • Interest rate spread volatility • Interest rate correlation • Foreign exchange correlation • Interest rate - FX correlation *Commodity derivatives specific inputs include:* • Commodity volatility • Forward commodity price	Level 2 or 3
Financial instruments held for trading - loans	Where observable market data is available, valuations are based on: • Observed market prices (circumstances are infrequent) • Relevant broker quotes • Observed market prices for similar instruments Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Credit spreads derived from the cost of CDS; or benchmark credit curves developed by the Company, by industry and credit rating • Prepayment speed • Collateral characteristics	Level 2 or 3

28. Assets and liabilities measured at fair value (continued)

Valuation methodologies (continued)

Product/instrument	*Valuation methodology, inputs and assumptions*	Classifications in the valuation hierarchy
Loans and advances to customers and lending-related commitments	Valuations are based on discounted cash flows, which consider: • Credit spreads, derived from the cost of CDS; or benchmark credit curves developed by the Company, by industry and credit rating • Prepayment speed Lending-related commitments are valued similar to loans and reflect the portion of an unused commitment expected, based on the Company's average portfolio historical experience, to become funded prior to an obligor default	Predominantly level 3
Securities financing agreements	Valuations are based on discounted cash flows, which consider: • Derivative features. For further information refer to the discussion of derivatives above • Market rates for the respective maturity • Collateral characteristics	Level 2

Assets and liabilities measured at fair value on a recurring basis

The following table presents the asset and liabilities reported at fair value as of 31 December 2017 and 2016, by major product category and fair value hierarchy.

	Level 1	Level 2	Level 3	Total
	$'000	$'000	$'000	$'000
At 31 December 2017				
Securities financing agreements:				
Securities purchased under agreements to resell	—	1,799,061	—	1,799,061
Securities borrowed	—	3,049,423	—	3,049,423
Financial assets held for trading:				
Debt and equity instruments	50,259,349	56,288,802	1,336,743	107,884,894
Derivative receivables	158,218	228,171,775	4,043,726	232,373,719
Financial assets designated at fair value through profit or loss:				
Debt and equity instruments	—	—	341,602	341,602
Total financial assets	50,417,567	289,309,061	5,722,071	345,448,699
Securities financing agreements:				
Securities sold under agreements to repurchase	—	3,052,613	—	3,052,613
Financial liabilities held for trading:				
Debt and equity instruments	32,709,118	13,505,976	712	46,215,806
Derivative payables	543,061	234,225,800	6,638,758	241,407,619
Other financial liabilities	—	13,671,674	6,992,969	20,664,643
Financial assets designated at fair value through profit or loss:				
Debt and equity instruments	—	1,465,247	—	1,465,247
Other liabilities:				
Deposits	—	108,101	—	108,101
Total financial liabilities	33,252,179	266,029,411	13,632,439	312,914,029

28. Assets and liabilities measured at fair value (continued)

Assets and liabilities measured at fair value on a recurring basis (continued)

	Level 1	Level 2	Level 3	Total
	$'000	$'000	$'000	$'000
At 31 December 2016				
Financial assets held for trading:				
Debt and equity instruments	48,988,614	39,530,046	808,769	89,327,429
Derivative receivables	76,571	227,134,018	6,507,790	233,718,379
Financial assets designated at fair value through profit or loss:				
Debt and equity instruments	—	—	315,659	315,659
Total financial assets	49,065,185	266,664,064	7,632,218	323,361,467
Financial liabilities held for trading:				
Debt and equity instruments	31,033,923	11,213,696	423	42,248,042
Derivative payables	76,358	230,220,052	5,460,654	235,757,064
Other financial liabilities	—	11,557,637	3,963,003	15,520,640
Total financial liabilities	31,110,281	252,991,385	9,424,080	293,525,746

Level 3 valuations

The Firm has established well structured processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3).

Estimating fair value requires the application of judgement. The type and level of judgement required is largely dependent on the amount of observable market information available to the Company. For instruments valued using internally developed valuation models and other valuation techniques that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgements used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate valuation model or other valuation technique to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs including, transaction details, yield curves, interest rates, prepayment speed, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves.

The following table presents the Company's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and, for certain instruments, the weighted averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.

In the Company's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Company's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Company and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlying's, tenors, or strike prices.

The input range and weighted average values will therefore vary from period-to-period and parameter-to-parameter based on the characteristics of the instruments held by the Company at each balance sheet date.

28. Assets and liabilities measured at fair value (continued)

Level 3 valuations (continued)

Product/instrument	Asset	Liability	Net fair value	Principal valuation technique	Unobservable input	Range of input values	Weighted average
At 31 December 2017	**$'000**	**$'000**	**$'000**				
Debt and equity instruments	**1,678,345**	**(712)**	**1,677,633**				
Corporate debt securities and other				Market comparables	Price	$3 - $111	$82
Residential mortgage-backed securities and loans				Discounted cash flows	Yield	3% - 16%	6%
					Prepayment speed	0% - 13%	9%
					Conditional default rate	0% - 5%	1%
					Loss severity	0% - 84%	3%
Commercial mortgage-backed securities and loans				Market comparables	Price	$0 - $100	$94
Loans				Market comparables	Price	$4 - $103	$84
Derivatives	**4,043,726**	**(6,638,758)**	**(2,595,032)**				
Net interest rate derivatives				Option pricing	Interest rate spread volatility	27bps – 38bps	
					Interest rate correlation	(50)% – 98%	
					Interest rate - FX correlation	60% - 70%	
				Discounted cash flows	Prepayment speed	0% - 30%	
Net credit derivatives				Discounted cash flows	Credit correlation	40% – 75%	
					Credit spread	6bps - 1,489bps	
					Recovery rate	20% - 70%	
					Yield	1% - 20%	
					Prepayment speed	4% - 21%	
					Conditional default rate	0% - 100%	
					Loss severity	4% - 100%	
				Market comparables	Price	$10 - $98	
Net foreign exchange derivatives				Option pricing	Interest rate - FX correlation	(50)% – 70%	
				Discounted cash flows	Prepayment speed	7%	
Net equity derivatives				Option pricing	Equity volatility	20% – 55%	
					Equity correlation	0% - 85%	
					Equity - FX correlation	(50)% - 30%	
					Equity - interest rate correlation	10% - 40%	
Net commodity derivatives				Option pricing	Forward commodity price	$54 – $68 per barrel	
					Commodity volatility	5% - 46%	
					Commodity correlation	(40%) - 70%	
Other financial liabilities	—	**(6,992,969)**	**(6,992,969)**	Option pricing	Interest rate spread volatility	27bps – 38bps	
					Interest rate correlation	(50)% – 98%	
					Interest rate - FX correlation	(50)% – 70%	
					Equity correlation	0% – 85%	
					Equity - FX correlation	(50%) - 30%	
					Equity - interest rate correlation	10% - 40%	
Total	**5,722,071**	**(13,632,439)**	**(7,910,368)**				

28. Assets and liabilities measured at fair value (continued)

Level 3 valuations (continued)

Product/instrument	Asset	Liability	Net fair value	Principal valuation technique	Unobservable input	Range of input values	Weighted average
At 31 December 2016	**$'000**	**$'000**	**$'000**				
Debt and equity instruments	**1,124,428**	**(423)**	**1,124,005**				
Corporate debt securities and other				Discounted cash flows	Credit spread	40bps – 375bps	96bps
					Yield	1% - 17%	9%
				Market comparables	Price	$0 - $121	$91
Residential mortgage-backed securities and loans				Discounted cash flows	Yield	4% - 18%	5%
					Prepayment speed	0% - 20%	8%
					Conditional default rate	0% - 34%	15%
					Loss severity	0% - 90%	37%
Commercial mortgage-backed securities and loans				Discounted cash flows	Yield	1% - 32%	8%
					Conditional default rate	0% - 100%	69%
					Loss severity	40%	40%
Derivatives	**6,507,790**	**(5,460,654)**	**1,047,136**				
Net interest rate derivatives				Option pricing	Interest rate correlation	(30)% – 100%	
					Interest rate spread volatility	3% – 38%	
Net credit derivatives				Discounted cash flows	Credit correlation	30% – 85%	
Net foreign exchange derivatives				Option pricing	Foreign exchange correlation	(30)% – 65%	
Net equity derivatives				Option pricing	Equity volatility	20% – 60%	
Net commodity derivatives				Discounted cash flows	Forward commodity price	$46 – $59 per barrel	
Other financial liabilities	**—**	**(3,963,003)**	**(3,963,003)**	Option pricing	Interest rate correlation	(30)% – 100%	
					Interest rate spread volatility	3% – 38%	
					Foreign exchange correlation	(30)% – 65%	
					Equity correlation	(50)% – 80%	
				Discounted cash flows	Credit correlation	30% – 85%	
Total	**7,632,218**	**(9,424,080)**	**(1,791,862)**				

The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the balance sheet and fair values are shown net.

Changes in and ranges of unobservable inputs

The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent as a change in one unobservable input may give rise to a change in another unobservable input; where relationships exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline); such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.

Yield - The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

Credit spread - The credit spread is the amount of additional annualised return over the market interest rate that a market participant would demand for taking exposure to the credit risk of an instrument. The credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation. Generally, an increase in the credit spread would result in a decrease in a fair value measurement.

28. Assets and liabilities measured at fair value (continued)

Changes in and ranges of unobservable inputs (continued)

Prepayment speed - The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralised pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Conditional default rate - The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralised obligation as a result of defaults. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement.

Loss severity - The loss severity (the inverse concept is the recovery rate) is the expected amount of future realised losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement.

Correlation - Correlation is a measure of the relationship between the movements of two variables (e.g., how the change in one variable influences the change in the other). Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks.

Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity and foreign exchange) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement.

Volatility - Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility Is a pricing input for options, including equity options, commodity options, and interest rate options. Generally, the higher the volatility of the underlying, the riskier the instrument. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

Fair value financial instruments valued using techniques that incorporate unobservable inputs

The potential impact as at 31 December of using reasonable possible alternative assumptions for the valuations including significant unobservable inputs have been quantified in the following table:

Sensitivity analysis of valuations using unobservable inputs	Fair Value			Favourable change	Unfavourable change
	Asset	Liability	Net	Income statement	
At 31 December 2017	**$'000**	**$'000**	**$'000**	**$'000**	**$'000**
Debt and equity instruments					
Corporate debt securities and other	1,664,449	(712)	1,663,737	83,031	(83,031)
Residential mortgage-backed securities	11,565	—	11,565	328	(328)
Commercial mortgage-backed securities	2,331	—	2,331	503	(503)
Total debt and equity instruments	**1,678,345**	**(712)**	**1,677,633**	**83,862**	**(83,862)**
Derivatives*	**4,043,726**	**(6,638,758)**	**(2,595,032)**	**39,996**	**(39,996)**
Other financial liabilities*	**—**	**(6,992,969)**	**(6,992,969)**	**107,781**	**(107,781)**
Total	**5,722,071**	**(13,632,439)**	**(7,910,368)**	**231,639**	**(231,639)**

28. Assets and liabilities measured at fair value (continued)

Fair value financial instruments valued using techniques that incorporate unobservable inputs (continued)

Sensitivity analysis of valuations using unobservable inputs	Fair Value			Favourable change	Unfavourable change
	Asset	Liability	Net	Income statement	
At 31 December 2016	**$'000**	**$'000**	**$'000**	**$'000**	**$'000**
Debt and equity instruments					
Corporate debt securities and other	1,116,836	(423)	1,116,413	20,471	(20,471)
Residential mortgage-backed securities	1,550	—	1,550	155	(155)
Commercial mortgage-backed securities	6,042	—	6,042	778	(778)
Total debt and equity instruments	**1,124,428**	**(423)**	**1,124,005**	**21,404**	**(21,404)**
Derivatives*	**6,507,790**	**(5,460,654)**	**1,047,136**	**13,305**	**(13,305)**
Other financial liabilities*	**—**	**(3,963,003)**	**(3,963,003)**	**19,667**	**(19,667)**
Total	**7,632,218**	**(9,424,080)**	**(1,791,862)**	**54,376**	**(54,376)**

* Given significant hedging between derivatives and other financial liabilities the net risk is considered to calculate the favourable/ unfavourable changes with the result then allocated to the two lines individually.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the balance sheets amounts (including changes in fair value) for financial instruments classified by the Company within level 3 of the fair value hierarchy.

Movement in assets and liabilities in Level 3 during year ended 31 December 2017

Financial assets	Debt and equity instruments	Derivative receivables	Total financial assets
	$'000	**$'000**	**$'000**
At 1 January 2017	1,124,428	6,507,790	7,632,218
Total gains recognised in profit or loss	82,639	2,143,878	2,226,517
Purchases	1,885,131	2,225,648	4,110,779
Sales	(1,369,048)	(3,541,844)	(4,910,892)
Issuances	—	1,157	1,157
Settlements	(103,870)	(2,370,600)	(2,474,470)
Transfers in to Level 3	490,559	987,507	1,478,066
Transfers out of Level 3	(431,494)	(1,909,810)	(2,341,304)
At 31 December 2017	1,678,345	4,043,726	5,722,071
Change in unrealised gains related to financial instruments held at 31 December 2017	134,692	729,155	863,847

28. Assets and liabilities measured at fair value (continued)

Movement in assets and liabilities in Level 3 during year ended 31 December 2017 (continued)

Financial liabilities	Debt and equity instruments	Derivative payables	Other financial liabilities	Total financial liabilities
	$'000	$'000	$'000	$'000
At 1 January 2017	423	5,460,654	3,963,003	9,424,080
Total (gains)/loss recognised in profit or loss	(614)	1,674,657	675,116	2,349,159
Purchases	(39,710)	(1,437,553)	—	(1,477,263)
Sales	41,804	2,508,171	18,932	2,568,907
Issuances	—	3,588	5,350,163	5,353,751
Settlements	(399)	(2,991,676)	(3,515,814)	(6,507,889)
Transfers in to Level 3	—	3,422,465	705,568	4,128,033
Transfers out of Level 3	(792)	(2,001,548)	(203,999)	(2,206,339)
At 31 December 2017	712	6,638,758	6,992,969	13,632,439
Change in unrealised losses related to financial instruments held at 31 December 2017	(72)	(40,029)	(22,878)	(62,979)

Movement in assets and liabilities in Level 3 during year ended 31 December 2016

Financial assets	Debt and equity instruments	Derivative receivables	Total financial assets
	$'000	$'000	$'000
At 1 January 2016	1,427,012	5,175,306	6,602,318
Total (loss)/gains recognised in profit or loss	(84,711)	1,200,083	1,115,372
Purchases	1,578,086	(185,641)	1,392,445
Sales	(1,303,679)	513,914	(789,765)
Issuances	14,927	298	15,225
Settlements	(106,648)	(219,772)	(326,420)
Transfers in to Level 3	147,701	263,403	411,104
Transfers out of Level 3	(548,260)	(239,801)	(788,061)
At 31 December 2016	1,124,428	6,507,790	7,632,218
Change in unrealised gains related to financial instruments held at 31 December 2016	(47,977)	1,080,402	1,032,425

Financial liabilities	Debt and equity instruments	Derivative payables	Other financial liabilities	Total financial liabilities
	$'000	$'000	$'000	$'000
At 1 January 2016	5,073	4,906,458	3,136,824	8,048,355
Total (gains)/loss recognised in profit or loss	8,098	796,473	177,779	982,350
Purchases	(1,865)	18,979	—	17,114
Sales	21,264	720,003	—	741,267
Issuances	—	1,491	2,302,540	2,304,031
Settlements	(32,598)	(938,435)	(1,656,106)	(2,627,139)
Transfers in to Level 3	1,288	243,760	56,015	301,063
Transfers out of Level 3	(837)	(288,075)	(54,049)	(342,961)
At 31 December 2016	423	5,460,654	3,963,003	9,424,080
Change in unrealised losses related to financial instruments held at 31 December 2016	(145)	681,963	74,124	755,942

Realised and unrealised gains/(losses) are reported in trading profits in the income statement.

28. Assets and liabilities measured at fair value (continued)

Transfers between levels for instruments carried at fair value on a recurring basis

For the years ended 31 December 2017 and 2016, there were no significant transfers between levels 1 and 2.

During the year ended 31 December 2017, transfers in to and out of level 3 included the following:

- $1.1 billion of assets and $1.2 billion of liabilities transferred out of level 3 driven by an increase in observability of credit default swaps;
- $0.5bn of assets and $0.5bn of liabilities transferred out of level 3 driven by an increase in observability of equity options;
- $0.2bn of assets transferred out of level 3 driven by an increase in observability of trading loans and corporate debt;
- $0.2bn of liabilities transferred out of level 3 driven by an increase in other financial liabilities;
- $0.6bn of assets and $3.0bn of liabilities transferred in to level 3 driven by a decrease in observability of equity options;
- $0.2bn of assets transferred in to level 3 driven by a decrease in observability of trading loans; and
- $0.6bn of liabilities transferred in to level 3 driven by a decrease in other financial liabilities.

During the year ended 31 December 2016, transfers in to and out of level 3 included the following:

- $0.3 billion of assets transferred out of level 3 driven by an increase in observability of corporate bonds and loans; and
- $0.2 billion of assets and $0.2 billion of liabilities transferred in to level 3 driven by a decrease in observability of credit default swaps.

All transfers are assumed to occur at the beginning of the period in which they occur.

Fair value of financial instruments not carried on balance sheet at fair value

Certain financial instruments that are not carried at fair value on balance sheet are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include securities purchased under agreements to resell, cash and balances at central banks, debtors, other assets, trade creditors and other liabilities.

The Company has $272.0 billion (2016: $246.5 billion) of current financial assets and $266.1 billion (2016: $236.2 billion) of current financial liabilities that are not measured at fair value, including loans and advances to customers of $2.6 billion (2016: $3.1 billion).

In estimating the fair value of these loans and advances to customers, typically a discounted cash flow model is applied with significant unobservable inputs and therefore would be classified as level 3 instruments. The fair value of these loans is not materially different from the carrying amount. All other instruments are of a short-term nature and the carrying amounts in the balance sheet approximate fair value.

29. Offsetting financial assets and financial liabilities

The table below presents the balance sheet assets and liabilities offset, where the offsetting criteria under IAS 32 'Financial Instruments: Presentation' ("IAS 32") have been met, and the related amounts not offset in the balance sheet in respect of cash and security collateral received and master netting agreements, where such criteria have not been met:

	Effects of offsetting on balance sheet			Related amounts not offset		
	Gross amounts	Amounts offset	Net amounts reported on balance sheet	Master netting agreements and other	Cash & security collateral	Net amount
	$'000	$'000	$'000	$'000	$'000	$'000
At 31 December 2017						
Financial assets:						
Securities purchased under agreements to resell [(a)]	284,606,993	(149,221,382)	135,385,611	(11,525,344)	(114,161,493)	9,698,774
Securities borrowed [(a)]	27,072,599	—	27,072,599	(9,100,106)	(15,846,294)	2,126,199
Financial assets held for trading [(b)]	362,065,083	(21,806,470)	340,258,613	(190,867,129)	(24,340,531)	125,050,953
Total	673,744,675	(171,027,852)	502,716,823	(211,492,579)	(154,348,318)	136,875,926
Financial liabilities:						
Securities sold under agreements to repurchase [(a)]	224,158,540	(149,221,382)	74,937,158	(11,525,344)	(61,149,668)	2,262,146
Securities loaned [(a)]	12,550,040	—	12,550,040	(9,104,687)	(3,170,688)	274,665
Financial liabilities held for trading [(b)]	330,722,398	(22,434,330)	308,288,068	(182,391,533)	(20,120,713)	105,775,822
Total	567,430,978	(171,655,712)	395,775,266	(203,021,564)	(84,441,069)	108,312,633

	Effects of offsetting on balance sheet			Related amounts not offset		
	Gross amounts	Amounts offset	Net amounts reported on balance sheet	Master netting agreements and other	Cash & security collateral	Net amount
	$'000	$'000	$'000	$'000	$'000	$'000
At 31 December 2016						
Financial assets:						
Securities purchased under agreements to resell [(a)]	244,294,408	(113,877,556)	130,416,852	(6,449,414)	(119,614,194)	4,353,244
Securities borrowed [(a)]	25,831,106	—	25,831,106	(17,174,407)	(6,518,661)	2,138,038
Financial assets held for trading [(b)]	342,284,385	(19,238,577)	323,045,808	(191,509,111)	(19,626,339)	111,910,358
Total	612,409,899	(133,116,133)	479,293,766	(215,132,932)	(145,759,194)	118,401,640
Financial liabilities:						
Securities sold under agreements to repurchase [(a)]	175,534,827	(113,877,556)	61,657,271	(6,449,414)	(53,019,937)	2,187,920
Securities loaned [(a)]	20,133,325	—	20,133,325	(17,174,407)	(2,101,111)	857,807
Financial liabilities held for trading [(b)]	313,994,831	(20,469,085)	293,525,746	(191,509,111)	(17,046,020)	84,970,615
Total	509,662,983	(134,346,641)	375,316,342	(215,132,932)	(72,167,068)	88,016,342

(a) The fair value of securities purchased under agreements to resell and securities borrowed accepted as collateral that the Company is permitted to sell or re-pledge in the absence of default, prior to netting adjustments, is $312,126 million (2016: $270,255 million). The fair value of securities sold under agreements to repurchase and securities loaned pledged to secure liabilities, prior to netting adjustments, is $223,997 million (2016: $188,793 million).

(b) Included within 'amounts offset' are the respective collateral payable and receivables with certain clearing counterparties.

30. Pensions

During the year, the Company was involved in the following pension schemes in the UK:

- JPMorgan UK Pension Plan ("UKP") - a defined contribution scheme (as a participating employer);
- JPMC UK Retirement Plan - a defined benefit scheme; and
- JPMorgan Cazenove (1987) Pension Scheme ("UKS") - a defined benefit scheme (as a participating employer).

In Europe, the Company also operates defined benefit and defined contribution schemes for its employers in the overseas branches in Switzerland, Germany, France, Italy and Spain. Based on full actuarial valuations carried out during the year, the net liability in respect of these European schemes as at 31 December 2017 amounted to $4,178,000 (2016: $9,488,000). The charge for the year through the income statement was $2,941,000 (2016: $2,094,000), and total gain recognised through statement of comprehensive income was $4,542,000 (2016: loss of 1,636,000).

JPMorgan UK Pension Plan

The Company participates in the JPMorgan UK Pension Plan, a defined contribution scheme operated by the Firm, which is open to additional members and benefit accruals.

JPMC UK Retirement Plan

The Firm maintains a defined benefit plan that is closed to additional benefit accruals known as the JPMC UK Retirement Plan. Whilst the Company is not a participating employer in this plan, it does have certain obligations under a Withdrawal Agreement, dated 24 May 2011, that was entered into in relation to J.P. Morgan Services LLP ("LLP"), a JPMorgan Chase undertaking which had previously been a participating employer in the plan. Under the terms of this agreement, the Company became responsible for LLP's portion of the pension obligations calculated in accordance with paragraph 5(2) of Schedule 1A to the Occupational Pension Schemes (Employer Debt) Regulations 2005 (as amended) with effect from 1 June 2011. The Company was not required to make any payments immediately or in relation to the ongoing funding of the plan.

However, payments may become due from the Company on the occurrence of the earliest of the following events:

- The commencement of the winding up of the plan;
- The insolvency of the plan's last remaining participating employer;
- The insolvency of the Company; or
- Any other date agreed between the Company and the Trustee of the Plan.

JPMorgan Cazenove (1987) Pension Scheme

The JPMorgan Cazenove (1987) Pension Scheme ("UKS") is an ongoing defined benefit plan. The Company has been a principal employer in relation to the UKS plan since August 2012. In May 2016, the Company agreed to and became responsible for 97.24% of the liabilities in respect of the UKS, taking over the obligation from its indirect subsidiary, JPMorgan Cazenove Service Company.

The principal assumptions adopted for the valuation of the UKS at 31 December were as follows:

	2017	2016
	% per annum	% per annum
Discount rate	2.4	2.5
Rate of salary increase	N/A*	N/A*
Rate of price inflation	3	3.5
Rate of pension increases	3.4	3

* The salary increase assumption no longer applies for the UKS as this plan was closed to future accruals on 31 May 2016.

30. Pensions (continued)

JPMorgan Cazenove (1987) Pension Scheme (continued)

Assumed life expectancy on retirement at age 65 were as follows:

	2017	2016
	years	years
Longevity at age 65 for current pensioners		
- Male	24.2	24.1
- Female	25.2	25.1
Longevity at age 65 for future pensioners		
- Male	26.9	26.7
- Female	27	26.9

The movements in the UKS' liability for the year ended 31 December was as follows:

	2017	2016
	$'000	$'000
Benefit obligation at beginning of the year	534,817	496,540
Current service costs	—	775
Interest costs	13,721	16,273
Actuarial (gain)/ loss	(8,736)	138,244
Benefits paid from plan/Company	(32,222)	(23,140)
Exchange rate changes	49,763	(93,875)
Benefit obligation at end of the year	557,343	534,817

The movements in the UKS' assets for the year ended 31 December was as follows:

	2017	2016
	$'000	$'000
Fair value of plan assets at beginning of year	434,806	450,857
Expected return on plan assets	11,156	14,891
Actuarial gain on plan assets	18,594	65,518
Employer contributions (including employer direct benefit payments)	4,330	7,866
Administrative expenses paid from plan assets	(293)	(566)
Benefits paid from plan/Company	(32,222)	(23,140)
Exchange rate changes	41,327	(80,620)
Fair value of plan assets at end of the year	477,698	434,806

The equity investments and bonds which are held in the plan assets are quoted and are valued at the current bid price in accordance with IAS 19.

30. Pensions (continued)

JPMorgan Cazenove (1987) Pension Scheme (continued)

The sensitivity of the defined benefit obligation to changes in the weighted principal assumption is as follows:

	2017			2016		
	Change in assumption	Increase in assumption	Decrease in assumption	Change in assumption	Increase in assumption	Decrease in assumption
At 31 December	%	% per annum	% per annum	%	% per annum	% per annum
Discount rate	0.25%	(5.49)%	5.77 %	0.25%	(5.44)%	5.72 %
Rate of salary increase	0.25%	N/A*	N/A*	0.25%	N/A*	N/A*
Rate of pension increase	0.25%	1.89 %	(1.85)%	0.25%	3.59 %	(3.53)%
Rate of price inflation	0.25%	3.16 %	(3.17)%	0.25%	3.16 %	(3.17)%
Post-retirement mortality assumption	Increase by one year	3.87 %	—	Increase by one year	3.87 %	—

* The salary increase assumption no longer applies for the UKS as this plan was closed to future accruals on 31 May 2016.

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant.

The expected return on scheme assets is determined by considering the expected returns available on the assets underlying the current investment policy. Expected yields on fixed interest investments are based on gross redemption yields as at the balance sheet date. Expected returns on equity investments reflect long-term real rates of return experienced in the respective markets.

Amounts recognised in the balance sheet arising from schemes that are wholly unfunded and those wholly or partly funded as at 31 December were as follows:

	2017	2016
	$'000	$'000
Present value of wholly or partly funded obligations	557,343	534,817
Fair value of plan assets	477,698	434,806
Deficit for funded plans - net liability	79,645	100,011
Experience adjustments on plan assets	(18,594)	(65,518)
Experience adjustments on plan liabilities	(13,548)	(6,661)

Movements in the UKS income statement for the year ended 31 December are as follows:

	2017	2016
	$'000	$'000
Current service cost	—	775
Interest cost	13,721	16,273
Expected return on plan assets	(11,156)	(14,891)
Administrative expenses paid from plan assets	293	566
Total pension cost recognised in the income statement	2,858	2,723
Exchange rate changes	8,436	(13,255)
Net amount recognised in the income statement	11,294	(10,532)

30. Pensions (continued)

JPMorgan Cazenove (1987) Pension Scheme (continued)

Movements in the UKS statement of other comprehensive income for the year ended 31 December are as follows:

	2017	2016
	$'000	$'000
Actuarial gain/(loss) immediately recognised	27,329	(72,726)

The asset allocation of the UKS defined benefit schemes was as follows:

	2017	2016
	Percentage of plan assets (%)	Percentage of plan assets (%)
Equity securities	38.4	35.6
Bond securities	61.2	62.4
Cash	0.4	2
	100	100

31. Share based payments

The Firm has granted long-term stock-based awards to certain key employees under its Long Term Incentive Plan ("LTIP"), as amended and restated effective 19 May 2015. Under the terms of the LTIP, as of 31 December 2017, 67 million shares of common stock were available for issuance through May 2019 (2016: 78 million shares). The LTIP is the only active plan under which the Firm is currently granting stock-based incentive awards. The LTIP, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the "LTI Plans" and such plans constitute the Firm's stock-based incentive plans.

The Firm separately recognises compensation expense for each tranche of each award as if it were a separate award with its own vesting date. For each tranche granted, compensation expense is recognised in line with how awards vest from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees of the Company who will become full-career eligible during the vesting period, compensation expense is recognised in line with how awards vest from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

Restricted stock units

Restricted stock units ("RSUs") are awarded at no cost to the recipient upon their grant. RSUs are generally granted annually and generally vest at a rate of 50% after two years, 50% after three years, and convert into shares of common stock at the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All of these awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation prior to vesting under certain specified circumstances. RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding.

Compensation expense for RSUs is measured based upon the number of shares granted multiplied by the stock price at the grant date, and for employee stock options and stock appreciation rights ("SARs") is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognised as described above.

31. Share based payments (continued)

Key employee stock options and SARs

Under the LTI Plans, stock options and SARs have generally been granted with an exercise price equal to the fair value of JPMorgan Chase & Co.'s common stock on the grant date. The Firm typically awards SARs to certain key employees once per year; the Firm also periodically grants employee stock options and SARs to individual employees. The 2013 grants of SARs to key employees vest rateably over five years (i.e. 20% per year) and awards contain clawback provisions similar to RSUs. The 2013 grants of SARs contain full-career eligibility provisions. SARs generally expire 10 years after the grant date.

The following table summarises additional information about options and SARs outstanding as at 31 December:

	31 December 2017			31 December 2016		
	Outstanding '000	Weighted average exercise price $	Weighted average remaining contractual life (in years)	Outstanding '000	Weighted average exercise price $	Weighted average remaining contractual life (in years)
Range of exercise prices						
$min - $20.00	175	19.49	1.05	75	19.49	2.05
$20.01 - $35.00	—	—	—	—	—	—
$35.01 - $50.00	806	43.56	3.00	1,144	43.32	4.08
$50.01 and above	—	—	—	—	—	—
Total	981	39.27	2.65	1,219	41.86	3.96

Broad-based employee stock options

No broad-based employee stock options were granted in 2017 or 2016. In prior years, awards were granted by the Firm under the Value Sharing Plan, a non-shareholder-approved plan. For each grant, the exercise price was equal to the Firm's common stock price on the grant date. The options become exercisable over various periods and generally expire 10 years after the grant date.

The weighted average share price during the year ended 31 December 2017 was $92.01 (2016: $65.62).

The total expense for the year relating to share based payments was $310 million (2016: $249 million), all of which relates to equity settled share based payments.

32. Transfers of financial assets

In the course of its normal business activities, the Company makes transfers of financial assets. Depending on the nature of the transaction, this may result in derecognition of the assets in their entirety, partial derecognition or no derecognition of the assets subject to the transfer. A summary of the main transactions, and the assets and liabilities and the financial risks arising from these transactions, is set out below:

Transfers of financial assets that do not result in derecognition

Assets are transferred under repurchase and securities lending agreements with other banks and financial institutions. In substance, these transactions constitute secured borrowings and therefore the assets are not derecognised from the balance sheet. The recipient is generally able to use, sell or pledge the transferred assets for the duration of the transaction. The Company remains exposed to interest and credit risk on these instruments which they are contractually required to repurchase at a later date. The counterparty's recourse is generally not limited to the transferred assets. The fair value of the collateral and the carrying amounts of the liabilities is disclosed in note 29.

The Company has also transferred equity securities to third parties in consideration for cash, while simultaneously entering into derivative transactions, with the same counterparty, which are linked to the transferred assets. The derecognition criteria have not been met because the Company retains the risk and rewards associated with the transferred financial assets, therefore the assets continue to be recognised on balance sheet together with the related liability.

32. Transfers of financial assets (continued)

The following is a summary of the fair value of the assets and carrying amount of related liabilities:

Fair value of the assets

	Fair value of the assets		Carrying amount of the related liability	
	2017	2016	**2017**	2016
	$'000	$'000	**$'000**	$'000
Financial assets held for trading	1,467,000	5,720,000	1,303,000	5,268,000

Continuing involvement in financial assets that have been derecognised

In some cases, the Company transfers financial assets that it derecognises entirely even though it may have continuing involvement in them. This typically happens when the Company has sold a financial asset to a SPE with limited other assets and enters into a derivative with the SPE to provide investors with a specified exposure (examples include credit-linked note vehicles and asset swap vehicles that are established on behalf of investors). The total notional and the market value of all derivatives executed by the Company with such SPEs (including those with such SPEs to which the Company did not transfer any financial assets) amounted to $14.3 billion and $982 million as of 2017 ($13.2 billion and $722 million as of 2016).

33. Financial risk management

Disclosures in relation to the Company's risk management and capital management have been presented in the Strategic report on pages 2 - 26 which forms part of these financial statements.

The Supplement and the Registration Document are available free of charge during normal business hours on any weekday (Saturdays and public holidays excepted) at the office of the Programme Agent (BNP Paribas Securities Services S.C.A., Frankfurt Branch, Europa-Allee 12, 60327 Frankfurt am Main, Germany) and furthermore are available on the website https://www.jpmorgan-zertifikate.de/en/library/legal-documents/ under the section "Legal documents".

Pursuant to article 16 para. 3 of the German Securities Prospectus Act, investors who have already agreed to purchase or subscribe for securities offered under a prospectus referring to the Registration Document before this Supplement has been published shall have the right, exercisable within a time period of two working days after the publication of this Supplement, to withdraw their acceptances, provided that the new factor, mistake or inaccuracy arose before the final closing of the offer to the public and the delivery of the securities. No grounds must be stated for the withdrawal, which must be made in text form. The timely dispatch of the withdrawal is sufficient to comply with the deadline.

Addressee of a withdrawal is BNP Paribas Securities Services S.C.A., Frankfurt Branch, Europa-Allee 12, 60327 Frankfurt am Main, Germany.