

## Pillar 3 Annual Disclosure Report as at 31<sup>st</sup> December 2018

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J.P. Morgan Capital Holdings Limited

J.P. Morgan Financial Investments Limited

J.P. Morgan Mansart Management Limited

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## 1. Introduction

### Overview

The Basel Committee on Banking Supervision published its set of rules on 16<sup>th</sup> December 2010, referred to as Basel III. The Basel framework consists of a three 'Pillar' approach:

- **Pillar 1** establishes minimum capital requirements, defines eligible capital instruments, and prescribes rules for calculating risk weighted assets ('RWA');
- **Pillar 2** requires banks to have an Internal Capital Adequacy Assessment Process ('ICAAP') and requires that banking supervisors evaluate each bank's overall risk profile as well as its risk management and internal control processes; and
- **Pillar 3** encourages market discipline through a prescribed set of disclosure requirements which allow market participants to assess the risk and capital profiles of banks.

The transposition of the Basel III framework into European law is in two parts: the Capital Requirements Directive IV (CRD IV/Directive 2013/36/EU) and the Capital Requirements Regulation ('CRR')<sup>1</sup>. It was published in the Official Journal of the European Union on 27<sup>th</sup> June 2013. Part Eight of CRR includes additional provisions on regulatory disclosure for credit institutions. Both the Directive and the Regulation are applicable since 1<sup>st</sup> January 2014.

This disclosure contains the Pillar 3 disclosures for J.P. Morgan Capital Holdings Limited, J.P. Morgan Financial Investments Limited and J.P. Morgan Mansart Management Limited; and provides information on the Firm's capital structure, capital adequacy, risk exposures, and RWA.

This disclosure fulfills the requirements as set out in Part Eight of CRR, and in the supplementary Implementing Technical Standards ('ITS')<sup>2</sup> and guidelines issued by the European Banking Authority ('EBA').

These disclosures have been prepared in full accordance with the EMEA Pillar 3 Process document<sup>3</sup>, which itself has been approved at Board level by all disclosing entities.

The Pillar 3 process outlines:

- The roles and responsibilities in the production of public disclosure
- The annual assessment process requirements for entity scope, disclosure frequency, accuracy and completeness of disclosure, process for omissions on the grounds of materiality, proprietary or confidentiality, and
- The overall governance requirements around disclosures and the processes to compile them.

The Pillar 3 disclosure has been approved for publication by the Board of Directors of the entities whose disclosure is contained herein. Attestation, that disclosures have been prepared in accordance with the J.P. Morgan EMEA Pillar 3 approved process, has been provided in line with the EBA Guidelines (EBA/GL/2016/11).

### Frequency of Disclosure (Article 433)

The UK entities in scope publish an annual report in accordance with Article 433 CRR.

The need to assess whether an institution should disclose some information more frequently than annually, under Part Eight of the CRR originates in Article 433 and the requirements are further articulated in the Guidelines, which were adopted by the Prudential Regulation Authority ('PRA') from 15<sup>th</sup> October 2015.

All J.P. Morgan Chase entities regulated under the Capital Requirements Directive IV ('CRD IV')<sup>4</sup> Capital Requirements Directive (CRD IV)/Regulation (EU) Directive 2013/36/EU have applied the Guidelines by:

- Enhancing the Pillar 3 process to include a full assessment of the need to publish data more frequently than annually; and
- Identifying the key data elements to disclose in order to meet the needs of potential users of the disclosure.

The internal assessment process (under Title II of Guidelines) to determine which J.P. Morgan entities should disclose more frequently than annually concluded that, of the consolidated entities in scope for this document, only J.P.Morgan Capital Holdings Limited is meeting the qualitative and quantitative thresholds to necessitate more frequent disclosure.

<sup>1</sup> Capital Requirements Regulation (CRR) / Regulation (EU) No. 575/2013

<sup>2</sup> EBA /GL/2014/14 Guidelines on materiality, proprietary and confidentiality and on disclosure frequency under Articles 432(1), 432(2) and 433 of Regulation (EU) No. 575/2013 published 23<sup>th</sup> December 2017 and EBA/ GL/2016/11 Guidelines on disclosure requirements under part eight of regulation (EU) No. 575/2013 published 4<sup>th</sup> August 2017

<sup>3</sup> J.P. Morgan EMEA Pillar 3 Process document - first published June 2016, latest update and approval April 2018

<sup>4</sup> Capital Requirements Directive (CRD IV) / Regulation (EU) Directive 2013/36/EU

## Means of Disclosure (Article 434)

The disclosure report for UK regulated entities is made available according to Article 434 CRR on the website of JPMorgan Chase & Co. at: <http://investor.shareholder.com/jpmorganchase/basel.cfm>

The ultimate parent of the entities in scope of the disclosure is JPMorgan Chase & Co. ('JPMorgan Chase'), a financial holding company incorporated under Delaware law in 1968. Firmwide disclosure is made under Basel III requirement and is available using the same link as the UK regulated entities disclosure. The report should be read in conjunction with the Annual Report on Form 10-K and the Quarterly Report on Form 10-Q which have been filed with the U.S. Securities and Exchange Commission and available at the following link: <http://investor.shareholder.com/jpmorganchase/sec.cfm>

## Scope of Application (Article 436)

These disclosures are made for J.P. Morgan entities within the U.K. and include disclosure for the following:

- **J.P. Morgan Capital Holdings Limited ('JPMCHL')**
  - The primary subsidiaries of which are J.P. Morgan Securities plc. ('JPMS plc'), J.P. Morgan Europe Limited ('JPMEU') and J.P. Morgan Limited ('JPML')
  - The main activities of the entities within the JPMCHL group are Corporate and Investment Bank activities
  - JPMCHL is the holding company for a number of regulated entities, which are subject to consolidated supervision at the level of JPMCHL
  - JPMS plc and JPMEU are authorised by the Prudential Regulation Authority ('PRA') and regulated by Financial Conduct Authority ('FCA'). JPML is authorised and regulated by the FCA
- **J.P. Morgan Financial Investments Limited ('JPMFIL'),**
  - The primary subsidiary of which is J.P. Morgan Markets Limited ('JPMML'). The main activities of the entities within the JPMFIL group are Corporate and Investment Bank activities
  - JPMFIL is the holding company for a regulated entity, which is subject to consolidated supervision at the level of JPMFIL
  - JPMML is authorised and regulated by the FCA
- **J.P. Morgan Mansart Management Limited ('JPMML')** which does not have a UK Parent entity.
  - The main activities of JPMML are the provision of strategic asset management services via fund solutions.
  - JPMML is authorised and regulated by the FCA

EU parent entities JPMCHL, JPMFIL & JPMML under Article 13 of the CRR, according to the aforementioned JPMC EMEA Pillar 3 Policy are identified for annual disclosure requirement.

The scope of consolidation for regulatory capital purposes is consistent with the accounting basis for consolidation. This document refers to JPMorgan Chase or the Firm when referring to frameworks, methodologies, systems and controls that are adopted throughout JPMorgan Chase and its subsidiaries. Entity names are used to refer to documents, financial resources and other tangible concepts relevant only to that entity. As required under Article 436 CRR, it is confirmed that there are no current or foreseen material practical or legal impediments to the prompt transfer of own funds or repayment between JPMS plc and its parent, nor between JPMML and its parent.

No items have been omitted due to materiality reasons under Titles III and IV of the Guidelines. Any line items that are not applicable have been hidden for presentation purposes.

## Board Declaration - Adequacy of Risk Management Arrangements

The Boards of entities in scope of the disclosure are satisfied that Management has taken reasonable care to establish and maintain risk systems and controls as appropriate to the business.

## Expected departure of the UK from the EU

In 2016, the UK voted to withdraw from the EU, and in March 2017, the UK invoked Article 50 of the Lisbon Treaty, which commenced withdrawal negotiations with the EU. As a result, and after two extensions of the negotiation timeline, the UK is currently scheduled to depart from the EU on 31<sup>st</sup> October, 2019. Negotiations regarding the terms of the UK's withdrawal continue between the UK and the EU, although the situation remains highly uncertain.

The Firm established a Firmwide Brexit Implementation programme in 2017. The Firm has been making the necessary modifications to its legal entity structure and operations in the EU, the locations in which it operates and the staffing in those locations to ensure the continuity of service to the clients. For further details please refer to the Annual reports of the companies for the year ended 31<sup>st</sup> December 2018 available on the Companies House Website.

## Key Metrics

Table 1: Key Metrics

\$'mm	JPMCHL		JPMFIL		JPMML	
	Q4 2018	Q4 2017	Q4 2018	Q4 2017	Q4 2018	Q4 2017
<b>Own funds</b>						
Tier 1 Capital	46,645	46,293	5,141	5,146	14	17
Tier 2 Capital	12,000	—	—	—	—	—
Total Own Funds	58,645	46,293	5,141	5,146	14	17
<b>Risk Weighted Assets</b>						
Risk Weighted Assets	241,615	255,473	734	608	13	12
<b>Capital Ratios as a Percentage of RWA</b>						
Tier 1 Capital Ratio	19.31%	18.12%	700.58%	846.41%	107.94%	139.04%
Total Capital Ratio	24.27%	18.12%	700.58%	846.41%	107.94%	139.04%
<b>Leverage Ratio</b>						
Leverage Exposure	672,872	611,137	5,467	5,455		
Leverage Ratio	6.93%	7.57%	94.05%	94.34%		
<b>Liquidity Coverage Ratio</b>						
Liquidity Coverage Ratio	275%	250%				

## 2. Risk Management and Objectives (Article 435)

### Risk Management Framework

Risk is an inherent part of JPMorgan Chase's business activities. The Firm's overall objective is to manage its business, and the associated risks, in a manner that balances serving the interest of its clients, customers and investors and protects the safety and soundness of the Firm. Firmwide Risk Management is overseen and managed on an enterprise-wide basis.

The Firm believes that effective risk management requires:

- Acceptance of responsibility, including escalation of risk issues, by all individuals within the Firm;
- Ownership of risk assessment, data and management within each line of business ('LOB') and corporate functions; and
- Firmwide structures for risk governance.

The Firm follows a disciplined and balanced compensation framework with strong internal governance and independent Board oversight.

The Firm has an Independent Risk Management ('IRM') function, which consists of the Risk Management and Compliance organizations. The CEO appoints, subject to the Board of Directors' Risk Policy Committee ('DRPC') approval, the Firm's CRO to lead the IRM organization and manage the risk governance framework of the Firm. The Firm places reliance on each of its LOBs and other functional areas giving rise to risk. Each LOB and other functional area giving rise to risk is expected to operate within the parameters identified by the IRM function, and within its own management-identified risk and control standards. The LOBs, inclusive of LOB aligned Operations, Technology and Oversight & Controls, are the 'first line of defense' in identifying and managing the risk in their activities, including but not limited to applicable laws, rules and regulations.

The IRM function is independent of the businesses and forms 'the second line of defense'. The IRM function sets and oversees various standards for the risk governance framework, including risk policy, identification, measurement, assessment, testing, limit setting, monitoring and reporting, and conducts independent challenge of adherence to such standards.

The Internal Audit function operates independently from other parts of the Firm and performs independent testing and evaluation of firmwide processes and controls across the entire enterprise as the Firm's 'third line of defense' in managing risk. The Internal Audit Function is headed by the General Auditor, who reports to the Audit Committee.

In addition, there are other functions that contribute to the firmwide control environment including Finance, Human Resource, Legal and Corporate Oversight & Control.

### Risk Management Organization

The independent status of the Risk Management organization is supported by a governance structure that provides for escalation of risk issues to senior management, the Firmwide Risk Committee, and the Board of Directors, as appropriate.

Each of the LOBs is accountable for identifying and addressing the risks presented by their respective businesses and for operating within a sound control environment. They establish a committee structure as they deem necessary for their business/sub-business structure. These committees serve as an escalation point for issues relating to risk management governance. Each of the functions is also responsible for the identification and assessment of the risks they create, and escalation of issues as appropriate. The Firmwide Risk Committee ('FRC') is the firm's highest management-level risk committee, and is chaired by the CEO and the CRO. The FRC serves as an escalation point for topics and issues raised by its members or by the Chair(s) of a subordinate committee. The escalation channel is defined within each committee's or forum's governing documents.

In addition to the governance bodies described above, the firm has other forums in the Finance division and at the LOB, regional and local office levels, where risk-related topics are discussed and escalated, as necessary. The membership of these committees is comprised on senior management of the firm including representation from the LOB and various functions. These committees may have other sub-committees as deemed necessary to deliver against the escalation mandate.

### Global Legal Entity Risk Framework

JPMorgan Chase utilizes Legal Entities ('LEs') around the world to implement its overall strategy. It is incumbent on lines of business to manage risk at the level of the LE and to comply with associated regulatory expectations. The Independent Risk Management function focuses on the control and management of risk and has established the Global Legal Entity Risk Framework to create a firmwide approach to LE risk:

- The Legal Entity Risk Forum oversees the framework as the governing body, supported by the Global LE Risk team
- LEs are tiered based on risk, which define appropriate levels of LE risk governance and the requirement for appointment of LE Risk Managers (LERMs or Chief Risk Officers where required by regulatory designations)
- LE Risk Managers ('LERMs') are accountable for the holistic oversight of risk at an entity level
- Risk functions/strips are responsible for setting global standards and executing legal entity requirements with respect to risk oversight
- LERMs may delegate responsibility for certain tasks to Regional Chief Risk Officer ('CRO') teams



## LE Risk Tiering

Risk Management oversight of LEs is executed according to the risk profile of a LE. The risk profile of a LE is derived by applying the LE Risk Tiering methodology, the result of which will determine a LE's 'Risk Tier'. Risk Tiering comprises four categories ranging from one to four, with Risk Tier one representing the highest requirement for LE Risk governance and oversight. The tiering methodology is comprised of qualitative and quantitative elements and a different level of oversight is established for each Tier, driven by a range of internal and external risk governance requirements. The core and recommended governance standards have been created for each Tier of governance.

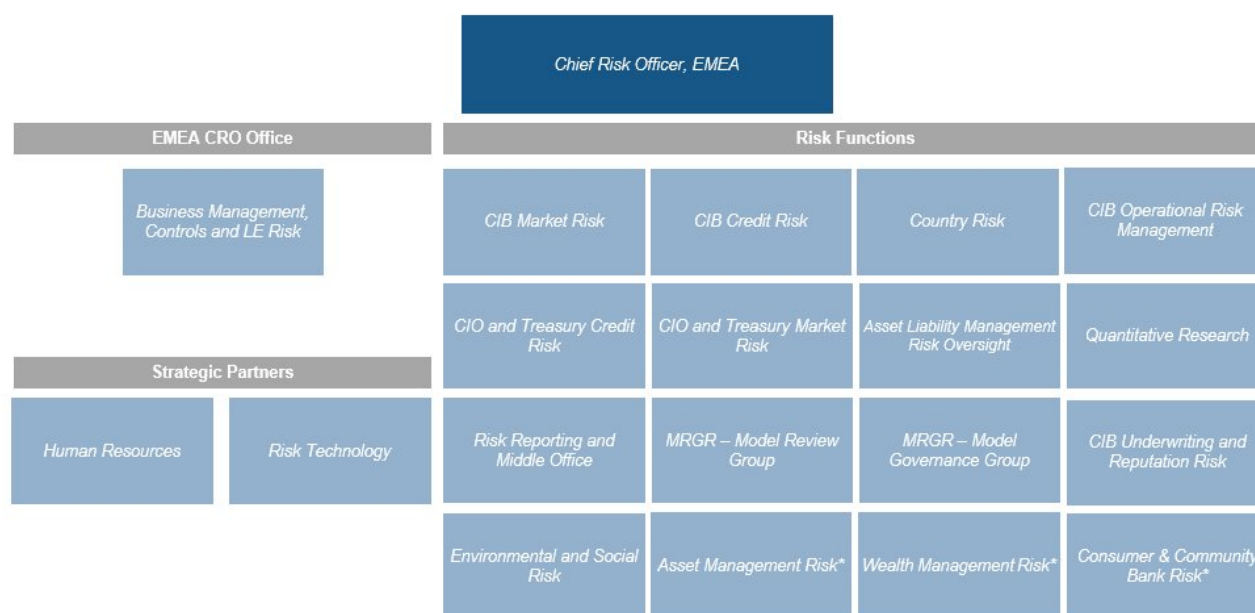
## Risk Governance and Oversight

As already discussed, J.P. Morgan's risk governance structure is based on the principle that each line of business is responsible for managing the risk inherent in its business, albeit with appropriate corporate oversight. Each LOB risk committee is responsible for decisions regarding the business risk strategy, policies (as appropriate) and controls. Therefore, each LOB within the regulated legal entities forms part of the Firmwide risk governance structure. To complement the global line of business structure, there is a regional governance construct as below:

- The ERC provides oversight of the risks inherent in the Firm's business conducted in EMEA or booked into EMEA entities and relevant branches as well as EMEA branches of ex-EMEA firms. In addition, to its regional responsibilities, the ERC has direct oversight of the risks in all EMEA Tier 1 entities, including JPMS plc. Tier 2 and 3 entities (including JPMEL) are overseen by the EMEA Risk Forum, a sub-forum of the ERC.
- The ERC is accountable to the EMC and the boards, DRPC and Oversight Committees of the relevant legal entities. In addition, it reports to the FRC and the HR Control Forum.
- The EMEA CRO leads the Risk Management function in the region and chairs the ERC and EMEA Risk Forum. The EMEA CRO is a member of the EMC.
- Under the Individual Accountability Regime, there are two Senior Management Functions ('SMFs') in EMEA Risk Management, including the EMEA CRO and Legal Entity CROs for JPMS plc. There are also a number of certified persons under the Certification Regime, including all EMEA Risk Management Heads that are accountable to the EMEA CRO for their regional responsibilities.

Whilst J.P. Morgan has established a comprehensive Firmwide risk policy framework, this is supplemented as required by legal entity-specific risk policies, which are approved by the relevant entity Boards and DRPCs.

## EMEA Risk Management Organisation



\*Business not in scope

## Identification and Measurement of Key Risks

The entities in scope complete the ICAAP periodically, which forms part of management and decision-making processes such as the Firm's risk appetite, strategy, capital and risk management frameworks, and stress testing. The ICAAP is used to assess the key risks to which the Firm is exposed; how these risks are measured, managed, monitored and mitigated; and how much capital the Firm should hold to reflect these risks now, in the future and under stressed conditions. Further information is provided on the ICAAP process under Art. 438 of CRR.

## Credit Risk

Credit risk is the risk associated with the default or change in credit profile of a customer, client or counterparty. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. In its consumer businesses, the Firm is exposed to credit risk primarily through its home lending, credit card, auto, and business banking businesses. In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending, market-making and hedging activities with and for clients and counterparties, as well as through its operating services activities (such as cash management and clearing activities), securities financing activities, investment securities portfolio, and cash placed with banks.

## Credit Risk Organization

Credit risk management is an independent risk management function that monitors, measures and manages credit risk throughout the Firm and defines credit risk policies and procedures. The credit risk function reports to the Firm's CRO. The Firm's credit risk management governance includes the following activities:

- Establishing a comprehensive credit risk policy framework;
- Monitoring, measuring and managing credit risk across all portfolio segments, including transaction and exposure approval
- Setting industry concentration limits and establishing underwriting guidelines
- Assigning and managing credit authorities in connection with the approval of all credit exposure;
- Managing criticized exposures and delinquent loans; and
- Estimating credit losses and ensuring appropriate credit risk-based capital management.

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses.

## Risk Measurement

Methodologies for measuring credit risk vary depending on several factors, including type of asset, risk measurement parameters and risk management and collection processes. Credit risk measurement is based on the probability of default of an obligor or counterparty, the loss severity given a default event and the exposure at default.

Credit loss estimates are based on estimates of the probability of default ('PD') and loss severity given a default. The probability of default is the likelihood that a borrower will default on its obligation; the loss given default ('LGD') is the estimated loss on the loan that would be realized upon the default and takes into consideration collateral and structural support for each credit facility. The estimation process includes assigning risk ratings to each borrower and credit facility to differentiate risk within the portfolio. These risk ratings are reviewed regularly by Credit Risk Management and revised as needed to reflect the borrower's current financial position, risk profile and related collateral. The calculations and assumptions are based on both internal and external historical experience and management judgment and are reviewed regularly.

For portfolios that fluctuate based upon an underlying reference asset or index, potential future exposure is measured using probable and unexpected loss calculations based upon estimates of probability of default and loss severity given a default.

## Stress Testing

Stress testing is important in measuring and managing credit risk in the Firm's credit portfolio. The process assesses the potential impact of alternative economic and business scenarios on estimated credit losses for the Firm. Economic scenarios and the underlying parameters are defined centrally, articulated in terms of macroeconomic factors and applied across the businesses. The stress test results may indicate credit migration, changes in delinquency trends and potential losses in the credit portfolio. In addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, including industry and country specific stress scenarios, as necessary. The Firm uses stress testing to inform decisions on setting risk appetite both at a Firm and LOB level as well as to assess the impact of stress on individual counterparties.

## Credit Risk Approval and Control

**Approval of clients:** All clients are subject to credit analysis and financial review by Credit Risk Management before new business is accepted.

**Establishment of credit lines:** All credit exposure must be approved in advance by a Credit Officer(s) with the level of credit authority required by the applicable credit authority grid unless qualifying for rules-based policies, described separately below. The approval is recorded in iCRD Proposals and credit lines are recorded on the Credit Risk Infrastructure System ('CRI'). Credit Officers approve intraday, advised and unadvised overdraft lines for clients based on analysis undertaken by Credit Risk Management.

In some instances, credit lines can be approved according to predetermined rules that are subject to annual review by the appropriate Credit Officers. The policy framework governing this provides a single, consistent global approach while allowing the application of differing local requirements.

**Intraday exposure control:** Intraday credit risk exposure arising from cash payments is captured by the Firm's intraday exposure control system and requires approval of the payment by a Credit Officer. The Intraday Exposure Transaction Approval Group ('TAG') monitors intraday exposure excesses within the Intraday Facility Monitor ('IFM') for breach workflow management, Global Funds Control ('GFC') for payment breaches and Exposure Control Module ('ECM') for Custody trades breaches. Officers within TAG can either i) release items - within a tolerance rule - according to a matrix based on the risk grade of the client and the value of the overall exposure to that client; iii) gain Credit Officer's approval to release funds; or iii) contact the client via Client Services/custody Middle Office and wait for confirmed receipt of funds. Breach approvals are executed on a time-critical basis. All payments are referred for approval to TAG prior to currency cut-off times rather than immediately after they are received.

## Risk Monitoring and Management

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses.

In addition, wrong-way risk - the risk that exposure to a counterparty is positively correlated with the impact of a default by the same counterparty, which could cause exposure to increase at the same time as the counterparty's capacity to meet its obligations is decreasing - is actively monitored as this risk could result in greater exposure at default compared with a transaction with another counterparty that does not have this risk

As part of its management of credit and counterparty credit exposures, the Firm actively engages in credit risk mitigation techniques to reduce the amount of credit risk it is taking, to spread the concentration of risk across its portfolio and ultimately to ensure efficient use of capital in compliance with the applicable regulations. This is accomplished through a number of means, including loan sales, receipt of collateral, master netting agreements, guarantees and credit derivatives and other risk-reduction techniques.

In addition to Risk Management, an independent Credit Review function is responsible for: Independently validating or changing the risk grades assigned to exposures in the Firm's wholesale and commercial-oriented retail credit portfolios, and assessing the timeliness of risk grade changes initiated by responsible business units; and

- Evaluating the effectiveness of business units' credit management processes, including the adequacy of credit analyses and risk grading/LGD rationales, proper monitoring and management of credit exposures, and compliance with applicable grading policies and underwriting guidelines.

## Risk Reporting

To enable monitoring of credit risk and effective decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior members of Credit Risk Management.. Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, risk committees, senior management and the Board of Directors as appropriate

## Market Risk

Market risk is the risk associated with the effect of changes in market factors such as interest and foreign exchange rates, equity and commodity prices, credit spreads or implied volatilities, on the value of assets and liabilities held for both the short and long term. The firm, through its lines of business ('LOBs'), may be exposed to market risk as a result of various financial activities, including trading, funding, underwriting and investing.

## Firmwide Market Risk Governance

Market Risk Management monitors market risks throughout the Firm and defines market risk policies, procedures and frameworks. The Market Risk Management function reports to the Firm's CRO, and seeks to manage risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the firm's market risk profile. The Firmwide Risk Executive ('FRE') Market Risk and Line of Business Chief Risk Officers ('LOB CROs') are responsible for establishing an effective market risk organization. The FRE Market Risk and LOB Heads of Market Risk establish the framework to measure, monitor and control market risk

## UK LE Market Risk Governance

The Legal Entity approach to risk governance mirrors the Firmwide approach, and is recorded within the JPMS plc, JPMEL and JPMML, Market Risk Management policies, procedures and framework. The Legal Entity Chief Risk Officer ('CRO') and Market Risk Officer ('MRO') are responsible for considering the Firmwide methodologies / procedures with respect to each Legal Entity.

Oversight, review and approval of these Legal Entity policies and frameworks are conducted by the respective LE Directors' Risk Policy Committees/Boards to approve, at least annually.

## Firmwide Risk Measurement

There is no single measure to capture market risk and therefore the Firm uses various metrics both statistical and non-statistical to assess risk. As the appropriate set of risk measures utilized for a given business activity depends on business mandate, risk horizon, materiality, market volatility and other factors, not all measures are used in all cases.

### VaR

The Firm utilises VaR, a statistical risk measure, to estimate the potential loss from adverse market moves in the current market environment. The Firm has a single VaR framework used as a basis for calculating Risk Management VaR and Regulatory VaR.

The framework is employed across the Firm using historical simulation based on data for the previous 12 months.

Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level. These VaR results are reported to senior management, the Board of Directors and regulators.

The Regulatory VaR model framework assumes a ten business-day holding period and an expected tail loss methodology which approximates a 99% confidence level. Regulatory VaR is applied to 'covered' positions as defined by Basel III, which may be different than the positions included in the Firm's Risk Management VaR.

### Stress Testing

Along with VaR, stress testing is an important tool in measuring and controlling risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behaviour as an indicator of losses, stress testing is intended to capture the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm runs weekly stress tests on market-related risks across the lines of business using multiple scenarios that assume significant changes in risk factors such as credit spreads, equity prices, interest rates, currency rates or commodity prices.

The Firm uses a number of standard scenarios that capture different risk factors across asset classes including geographical factors, specific idiosyncratic factors and extreme tail events. The stress testing framework calculates multiple magnitudes of potential stress for both market rallies and market sell-offs for each risk factor and combines them in multiple ways to capture different market scenarios. For example, certain scenarios assess the potential loss arising from current exposures held by the Firm due to a broad sell off in bond markets or an extreme widening in corporate credit spreads. The flexibility of the stress testing framework allows risk managers to construct new, specific scenarios that can be used to form decisions about future possible stress events. The stress testing framework is known as Firmwide Stress Infrastructure ('FSI') which is a risk management tool that simulates changes to the prices of trading assets across a range of economic and market scenarios. It is used to measure the Firm's vulnerability to losses under a range of stressed but plausible market environments and to understand the risk factors and assets responsible for those losses.

Stress testing complements VaR by allowing risk managers to shock current market prices to more extreme levels relative to those historically realized, and to stress test the relationships between market prices under extreme scenarios.

Stress-test results, trends and qualitative explanations based on current market risk positions are reported to the respective Lines of Business ('LOB') and Firm's senior management to allow them to better understand the sensitivity of positions to certain defined events and to enable them to manage their risks with more transparency. In addition, results are reported to the Board of Directors.

Stress scenarios are defined and reviewed by Market Risk, and significant changes are reviewed by the relevant LOB Risk Committees and may be redefined on a periodic basis to reflect current market conditions.

### Non-statistical risk measures

Measures such as credit spreads, net open positions, basis point values, option sensitivities, are utilized within specific market context and aggregated across businesses.

### Profit & Loss ('P&L') Drawdowns

Metrics to advise senior management of potential out-sized losses and to initiate discussion of remedies (e.g. reduction of exposure).

### Single Name Position Risk ('SNPR')

The framework to capture exposures to credit families (and entities within credit families) or standalone issuers/issuers families not part of credit families, assuming default of the issuer with zero recovery.

SNPR captures exposures to credit families (and entities within credit families) or standalone issuers/issuers families not part of credit families, assuming default of the issuer with zero recovery.

## Firmwide Market Risk Monitoring and Control

Market risk limits are employed as the primary control to align the Firm's market risk with certain quantitative parameters within the Firm's Risk Appetite framework.

Senior management, including the Firm's CEO, CRO and Market Risk Management are responsible for reviewing and approving limits on an ongoing basis. Limits that have not been reviewed within a specified time period by Market Risk Management are escalated to senior management.

Limit breaches are required to be reported in a timely manner to limit signatories. Market Risk Management and senior management as appropriate determine the course of action required to return to compliance, such as a reduction in risk or the granting a temporary

increase in limits. Aged or significant breaches are escalated to senior management, the LOB Risk Committee, and/or the Firmwide Risk Committee.

## Concentration Risk

Concentration Risk refers to any significant concentration of factors (e.g. single name, positions, etc.) that may lead to financial losses for the firm. This risk is inherently measured, monitored and controlled as part of the market risk management framework and related controls as described above.

Illiquid trading risk, as part of concentration risk, may include exposure to a lack of liquidity of financial products caused by the complexity of the product, a model derived valuation that includes risk sensitivities that are unobservable, long-dated, or thinly-traded, or exposure, plain vanilla or otherwise, that is outsized in relation to market liquidity. LOB Risk Committee members with responsibility for trading areas (LOB/Sub-LOB Trading Heads) are responsible for presenting these risks within their business to relevant LOB Risk Committees on a semi-annual basis.

## Material Portfolio of Covered Positions

JPMCHL's market risks arise predominantly from activities in the Firm's CIB business booked in JPMS plc. CIB makes markets in products across fixed income, foreign exchange, equities and commodities markets. JPMCHL's portfolio of covered positions under Basel III is predominantly held by the CIB. Some additional covered positions are held by the Firm's other LOBs. JPMFIL's market risks arise from positions in the Firm's CIB business booked in JP Morgan Markets Limited.

## Operational Risk

Operational risk is the risk associated with inadequate or failed internal processes, people and systems, or from external events and includes compliance risk, conduct risk, legal risk, and estimations and model risk. Operational risk is inherent in the Firm's activities and can manifest itself in various ways, including fraudulent acts, business interruptions, cybersecurity attacks, inappropriate employee behaviour, failure to comply with applicable laws, and regulations or failure of vendors to perform in accordance with their agreements. These events could result in financial losses, litigation and regulatory fines, as well as other damages to the Firm. The goal is to keep operational risk at appropriate levels in light of the Firm's financial position, the characteristics of its businesses, and the markets and regulatory environments in which it operates.

## Operational Risk Management Framework

To monitor and control operational risk, the Firm has an Operational Risk Management Framework ('ORMF') which is designed to enable the Firm to maintain a sound and well-controlled operational environment. The ORMF has four main components: Governance, Operational Risk Identification and Assessment, Operational Risk Measurement, and Operational Risk Monitoring and Reporting.

### Governance

The lines of business and Corporate are responsible for applying the ORMF in order to manage the operational risk that arises from their activities. The Control Management organization, which consists of control managers within each line of business and Corporate, is responsible for the day-to-day execution of the ORMF. Line of business and Corporate control committees are responsible for reviewing data that indicates the quality and stability of processes, addressing key operational risk issues, focusing on processes with control concerns, and overseeing control remediation. These committees escalate operational risk issues to the Firmwide Control Committee ('FCC'), as appropriate. The Firmwide Risk Executive for Operational Risk Management ('ORM'), a direct report to the Chief Risk Officer ('CRO'), is responsible for defining the ORMF and establishing minimum standards for its execution. Operational Risk Officers report to both the line of business CROs and to the Firmwide Risk Executive for ORM, and are independent of the respective businesses or corporate functions they oversee. The Firm's Operational Risk Management Policy is approved by the Directors' Risk Policy Committee ('DRPC'). This policy establishes the Operational Risk Management Framework for the Firm.

### Operational Risk identification and assessment

The Firm utilizes a structured risk and control self-assessment process which is executed by the lines of business and Corporate in accordance with the minimum standards established by ORM, to identify, assess, mitigate and manage its operational risk. As part of this process, lines of business and Corporate identify key operational risks inherent in their activities, address gaps or deficiencies identified, and define actions to reduce residual risk. Action plans are developed for identified control issues and lines of business and Corporate are held accountable for tracking and resolving issues in a timely manner. Operational Risk Officers independently challenge the execution of the self-assessment and evaluate the appropriateness of the residual risk results. In addition to the self-assessment process, the Firm tracks and monitors events that have led to or could lead to actual operational risk losses, including litigation-related events. Responsible lines of business and Corporate analyse their losses to evaluate the effectiveness of their control environment to assess where controls have failed, and to determine where targeted remediation efforts may be required. ORM provides oversight of these activities and may also perform independent assessments of significant operational risk events and areas of concentrated or emerging risk.

### Operational Risk Measurement

In addition to the level of actual operational risk losses, operational risk measurement includes operational risk-based capital and operational risk loss projections under both baseline and stressed conditions. The primary component of the operational risk capital estimate is the Loss Distribution Approach ('LDA') statistical model, which simulates the frequency and severity of future operational risk loss projections based on historical data. The LDA model is used to estimate an aggregate operational risk loss over a one-year time horizon, at a 99.9% confidence level. The LDA model incorporates actual internal operational risk losses in the quarter following

the period in which those losses were realized, and the calculation generally continues to reflect such losses even after the issues or business activities giving rise to the losses have been remediated or reduced. As required under the Basel III capital framework, the Firm's operational risk-based capital methodology, which uses the Advanced Measurement Approach ('AMA'), incorporates internal and external losses as well as management's view of tail risk captured through operational risk scenario analysis, and evaluation of key business environment and internal control metrics. The Firm does not reflect the impact of insurance in its AMA estimate of operational risk capital. The Firm considers the impact of stressed economic conditions on operational risk losses and develops a forward looking view of material operational risk events that may occur in a stressed environment. The Firm's operational risk stress testing framework is utilized in calculating results for the Firm's Comprehensive Capital Analysis and Review ('CCAR') and Internal Capital Adequacy Assessment Processes ('ICAAP').

## Operational Risk Monitoring and reporting

ORM has established standards for consistent operational risk monitoring and reporting. Operational risk reports are produced on a firmwide basis as well as by line of business and Corporate. Reporting includes the evaluation of key risk indicators against established thresholds as well as the assessment of different types of operational risk against stated risk appetite. The standards reinforce escalation protocols to senior management and to the Board of Directors.

## Liquidity Risk

For Liquidity Risk please refer to Section 20.

## Structural Interest Rate Risk ('Interest Rate Risk')

Structural Interest Rate Risk, also known as Interest Rate Risk ('IRR'), is defined as Interest Rate Risk resulting from the Company's traditional banking activities (accrual accounted on and off balance sheet positions) which includes extension of loans and credit facilities, taking deposits and issuing debt (collectively referred to as 'non-trading' activities) and also the impact from Treasury and Chief Investment Office ('T/CIO') investment portfolio and other related T/CIO activities. IRR from non-trading activities can occur due to a variety of factors, including but not limited to:

- Difference in the timing among the maturity or re-pricing of assets, liabilities and off-balance sheet instruments;
- Differences in the balances of assets, liabilities and off-balance sheet instruments that re-price at the same time;
- Differences in the amounts by which short-term and long-term market interest rates change; and
- Impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change.

## Oversight and governance

Governance for Firmwide IRR is defined in the IRR Management Policy which is approved by the DRPC. The CIO, Treasury and Corporate Risk Committee ('CTC RC') is the governing committee with respect to IRRBB.

- Reviews the IRR Management policy;
- Reviews the IRR profile of the Firm and compliance with IRR limits;
- Provides Governance on legal entity related exposures; and
- Reviews significant changes to IRR models and/or model assumptions including the changes related to IRR management.

IRR exposures, significant models and/or assumptions including the changes are reviewed by ALCO. The ALCO provides a framework for overseeing the IRR of LOBs, foreign jurisdictions and key legal entities to appropriate LOB ALCOs, Country ALCOs and other local governance bodies.

In addition, oversight of structural interest rate risk is managed through IRR Management, a dedicated risk function reporting to the CTC CRO.

IRR Management is responsible for, but not limited to:

- Measuring and monitoring IRR and establishing limits; and
- Creating and maintaining governance over IRR assumptions

The Firmwide risk framework applies to the Company as described above.

## Risk Identification and Measurement

T/CIO manages IRRBB exposure on behalf of the Firm by identifying, measuring, modelling and monitoring IRR across the Firm's balance sheet. T/CIO identifies and understands material balance sheet impacts of new initiatives and products and executes market transactions to manage IRR through T/CIO investment portfolio's positions. Execution by T/CIO will be based on parameters established by senior management, per the T/CIO Investment Policy. LOBs are responsible for developing and monitoring the appropriateness of LOB specific IRR modelling assumptions.



Measures to manage IRR include:

- Earnings-at-risk: Primary metric used to gauge the firm's shorter term IRR exposure is Earnings at Risk ('EaR'), or the sensitivity of pre-tax income to changes in interest rates over a rolling 12 months compared to a base scenario; and
- Economic Value Sensitivity ('EVS'): An additional Firmwide metric utilised to determine changes in asset/liability values due to changes in interest rates.

## Reputation Risk

Reputation Risk is the potential that an action or inaction will reduce trust in the Firm's integrity or competence by its various constituents, including clients, counterparties, customers, investors, regulators, employees, communities or the broader public.

## Governance and Policy Framework

Reputation risk is the responsibility of each Line of Business ('LOB'), function, and employee within the firm. Reputation of the firm, and not just business benefits and regulatory requirements, should be considered when deciding whether to pursue any new product, transaction, client relationship, jurisdiction, business process or any other matter. Any employee may refer a matter for review to any member of a Reputation Risk Office ('RRO'). The RRO is the conduit through which transactions or matters are raised to the relevant Reputation Risk Committee ('RRC') or other forum for the appropriate escalation and determination of reputation risk.

J.P. Morgan ('JPM') has an established risk management governance framework, including a policy and standards, for managing reputation risk. The requirements of the reputation risk governance framework as described in the Firmwide Reputation Risk Governance policy are executed by each of JPM's LOBs through adherence to the Firmwide Reputation Risk Standards.

The governance framework includes the following:

- Governance - The Firmwide Risk Executive ('FRE') Reputation Risk and Firmwide Reputation Risk Governance ('FRRG') establishes the reputation risk framework for the firm. FRRG provides oversight of governance infrastructure and process to support the consistent identification, escalation, management and monitoring of reputation risk issues firmwide.
- Lines of Business - The firm establishes the specific manner in which we identify, control and manage reputation risk as set forth in the Firmwide Reputation Risk Governance policy and in the Firmwide Reputation Risk Standards, which apply to all LOBs, and are designed to assist with identifying and escalating any potential reputation risk. Each LOB, including the functions aligned to an LOB, is responsible for following the Firmwide Reputation Risk Governance policy and the Firmwide Reputation Risk Standards.
- Functions - It is the responsibility of each function to consider the reputation of the firm by reference to the Firmwide Reputation Risk Governance policy. They are expected to apply the appropriate level of due diligence to reputation risks in their respective areas, and adapt as appropriate the range of control capabilities and processes needed to minimize the risk. Matters may be escalated per the Firmwide Reputation Risk Standards or to FRRG.
- Escalation - Should the Committee or any member consider that the inherent reputation risk is of such a degree to warrant it, or if the Committee does not reach consensus for a particular matter, the matter may be escalated to the FRE for Reputation Risk and/or the LOB CRO. The LOB Risk Committee should be the initial point of escalation prior to an escalation to the Board.
- Cross LOB Coordination - Any review involving a client or transaction shared with more than one LOB may be discussed at an ad hoc RRC consisting of attendees from each of the relevant LOB RRCs. A decision as to which LOB RRC(s) should review a shared client will be made by the LOB RRC's leadership in consultation with the FRE Reputation Risk.

Consistent with regulatory guidance, the firm's Board Risk Committee ('RC') Charter requires approval of primary risk policies of the firm. The following JPMC policies and associated documents comprise key components of the policy framework:

- Risk Governance Policy - a BRC primary risk policy
- Firmwide Reputation Risk Governance Policy - a BRC primary risk policy
- Firmwide Reputation Risk Standards
- LOB Reputation Risk Committees Charters, as applicable

## Approach to Risk Management

The Firmwide Reputation Risk Governance policy is executed by each LOB through adherence to the Firmwide Reputation Risk Standards, which provide guidance and details on the following:

- Scope and role of the RRCs, as applicable
- Membership, administration, reporting and the role of the RRO
- Criteria for escalation to RRC, as applicable
- Processes for escalation referral, approval and post approval requirements

Any employee may refer a matter for review. However, the relevant business or function is responsible for performing its own due diligence, and considering and escalating potential reputation risk within its own management structure before significant progress is made on any transaction or activity.

## Securitisation Risk

The risks related to securitisation and resecuritisation positions are managed in accordance with the Firm's credit risk and market risk management policies. The Firm's due diligence procedures and risk management and mitigation of securitisation risk are detailed further under Article 449 of CRR (Section 15.).

## Fiduciary Risk

Fiduciary risk is the failure to exercise the applicable standard of care, to act in the best interests of clients or treat clients fairly as required under applicable law or regulation potentially resulting in regulatory risk, reputation risk and financial liability. Depending on the fiduciary activity and capacity in which the firm or LOB is acting, federal, state statutes, common law and regulation require adherence to specific duties in which the firm must always place the client's interests above its own.

As an example, common law requires that fiduciaries act in accordance with the duties of loyalty and care:

- **Duty of Loyalty:** Act in the best interest of their clients, refrain from impermissible self-dealing, avoid or manage conflicts of interest; and,
- **Duty of Care:** Manage client assets with reasonable care, skill, and prudence in context of whole portfolio and individual securities.

The firmwide fiduciary risk governance is structured as follows:

### Board of Director Committees:

- The DRPC - The committee's responsibilities include oversight of management's exercise of its responsibility to assess and manage, among other things, the governance frameworks or policies for fiduciary risk; and,
- Audit Committee ('AC') - oversee and receive reporting on fiduciary risk.

### Firmwide Fiduciary Risk Committees:

- The Firmwide Fiduciary Risk Governance Committee ('FFRGC') is responsible for providing oversight of the Firmwide Fiduciary Risk Governance Framework (Fiduciary Framework) which supports the consistent identification and escalation of fiduciary risk issues by the relevant LOB or Functional Group. The FFRC is also responsible for creating metrics reporting to track fiduciary activity and issue resolution firmwide and for further escalation to the FRC, DRPC, AC and any other committee as considered appropriate.
- The Firmwide Fiduciary and Conflicts of Interest Committee ('FFCOI') provides a firmwide committee for cross LOB review and escalation of issues and control matters related to the implementation of the firmwide fiduciary and conflicts of interest framework.

### Line of Business Risk Committees:

- Each LOB and their respective risk and governance committees are responsible for the oversight and management of the fiduciary risks in their businesses in accordance with the Fiduciary Framework.

Fiduciaries, under applicable law and regulation, must act in accordance with a higher standard of care than non-fiduciaries, and as a result may be exposed to substantially greater regulatory requirements and oversight, reputation risk and potential liability. Given the specialized nature of these activities the Firm has adopted a Fiduciary framework with a disciplined and structured approach to the identification and management of fiduciary issues and the approach to risk management is as follows:

- Each LOB and in scope Corporate Function is responsible for identifying, determining and documenting its fiduciary activities and related risks and for complying with the regulations, laws and contracts related to its Fiduciary activities. Each LOB owns the risks related to the fiduciary activities it conducts and must work in consultation with Oversight & Control, Risk, Legal and Compliance in managing these risks. Each LOB, in-scope Corporate Function, and its respective Risk Committee and/or Control Committee, is responsible for the oversight and management of Fiduciary activities and associated risks within such LOB and in-scope Corporate Function.
- Each LOB and in-scope Corporate Function must have processes in place for Fiduciary activities in alignment with the Fiduciary Risk Framework, to ensure appropriate review of matters that expose the firm to fiduciary risk. Matters giving rise to associated risks must be escalated to the applicable LOB Risk and/or Control Committees. A Fiduciary risk update will be provided by Fiduciary risk committee representatives to their respective LOB Risk Committee at least annually.
- Significant changes to Firm fiduciary control activities, governing frameworks or decision making processes that impact client investment selections must be reviewed by the appropriate governance committees prior to implementation.



- Cross-LOB fiduciary risk issues, such as actual, potential or perceived conflicts of interest, must be identified and documented with processes designed to maintain a consistent approach to address and manage cross-LOB fiduciary activity and related risks. Fiduciary matters with potential impact on other LOBs, must be reported to the appropriate LOB Risk and/or Control Committee, and the FFCOI. The FFCOI will determine whether cross-LOB review of the matter is needed. The FFCOI will further report significant issues to the FFRGC as appropriate. The FFRGC should escalate issues of significant and provide a periodic update to the Firmwide Risk Committee ('FRC'), the DRPC and the Audit Committee, as appropriate.

## Business Risk

Business risk is the risk associated with the Firm's current and future business plans and objectives. Business risk includes the risk to current or anticipated earnings, capital, liquidity, enterprise value, or the Firm's reputation arising from adverse business decisions, poor implementation of business decisions, or lack of responsiveness to changes in the industry or external environment.

## Risk Management

Business risk as it impacts capital is managed through the entities' strategic and business planning as part of their Capital Management Framework.

Business risk is also considered and managed in a wider context. For example, for new products and services, failure to identify new or changed risks may expose the Group to financial loss or harm its reputation. Accordingly the New Business Initiative Approval ('NBIA') policy provides a framework that governs the review and approval of new or materially changed products and services, while making sure that risks are identified, measured, monitored and controlled. LOBs are authorised to introduce new products, services and processes and are responsible for the new products and services they introduce.

Under the NBIA policy, the business is required to undertake an analysis of the economic, regulatory or legal entity capital impact of the new business, as appropriate. Mandatory signoffs for NBIAs include the CRO or legal entity risk manager for each entity and the EMEA Legal Entity Controller, ensuring the risk implications for an entity are considered in NBIA decisions as well as the compatibility of NBIAs with the strategy for relevant entities. A thorough risk review is also required with LOB and cross functional participation to address all potential risks including any heightened risk due to complexity, valuation and a less favourable economic environment.

## Risk Reporting and Measurement

J.P. Morgan's stress testing programme is an important component in managing, measuring and reporting business risk, testing the Firm's financial resilience in a range of severe economic and market conditions. For example, quarterly baseline and stressed capital plans are prepared under the ICAAP framework, which include P&L projections (as well as RWAs and the overall capital position) over the three-year time horizon modelled.

## Risk Mitigation

Capital projections are used as a tool to help mitigate business risk. If the baseline capital projections, which include P&L projections from the LOB, show a reduction in the earnings, this could be an indicator that a strategy is not implemented successfully and in certain cases extra capital is set aside in the form of Pillar 2. Similarly, where the stressed capital projections show risks to capital beyond the entities' risk appetite, remedial action is taken.

Additionally, where unacceptable risks are identified through the NBIA process, changes are made to the new business initiative prior to their implementation or the initiative is withdrawn.

## Risk Appetite

The Firm's overall risk appetite is established by management taking into consideration the Firm's capital and liquidity positions, earnings power, and diversified business model. The Risk Appetite framework is a tool to measure the capacity to take risk and is expressed through qualitative factors and quantitative parameters at the Firm and/or LOB levels, including quantitative parameters on stressed net income, capital, liquidity risk, credit risk, market risk and structural interest rate risk. Performance against these parameters informs management's strategic decisions and is reported to the Firmwide Risk Committee and DRPC.

The Firm's Risk Appetite framework is reviewed on an ongoing basis, and is reviewed with the FRC and DRPC at least annually. JPMCHL and JPMFIL material subsidiary have their own risk appetite policy including quantitative and qualitative parameters leveraging the Firm's framework and approved annually by the relevant Boards. The ERC and relevant DRPC as applicable review the risk appetite parameters quarterly.

Key figures and ratios regarding the interaction between the risk profile and the risk appetite are deemed to be proprietary information as it relates to competitively significant operational conditions and business circumstances, as defined within EBA guidelines EBA/GL/2014/14.

## Members of the Board of Directors

### J.P. Morgan Capital Holdings Limited

As at 31<sup>st</sup> December 2018, the JPMCHL Board is comprised of two directors. On 28<sup>th</sup> November 2018, Messrs. Lava, Griffin and Mouchel resigned from the Board. The directors are:

#### Deborah Toennies

Ms. Toennies joined the Board of JPMCHL in February 2016. She is a Managing Director and the Head of Regulatory Affairs for the Corporate and Investment Bank. Prior to this she has held various roles within JPMorgan including Head of Conduit Management and Business Development, and as a Managing Director in both Structured Credit Products and Securitised Products Group. Before joining JPMorgan, Ms. Toennies worked at Coldwell Banker as a Senior Auditor, and Arthur Andersen & Company as a Staff Auditor. Ms. Toennies has an MBA in Finance and Strategy Management from the University of Chicago, and a BS in Accountancy from Miami University.

#### Dale Braithwait

Mr Braithwait joined the Board of JPMCHL in November 2018. He is the J.P. Morgan group's global lead for Legal Entity Risk and the EMEA Chief Risk Office team. Mr Braithwait is a member of the EMEA Risk Committee and the EMEA Operating Committee. He is also a member of the Eurex Clearing Risk Committee. Mr Braithwait joined J.P. Morgan in 1997 and has held various roles relating to risk management, derivatives clearing, and fund administration, most recently as Global Head of Credit Clearing and Intermediation. During a period from 2003 to 2005, Mr. Braithwait left J.P. Morgan to set-up the Risk, Operations and Finance functions for a fund manager. Mr Braithwait holds a Bachelor of Science in Chemistry from Imperial College, London.

#### Jean-Jacques Lava

Mr. Lava joined the Board of JPMCHL in February 2016. He joined JPMorgan in 1998, and is currently an Executive Director and the Chief Financial Officer for Continental Europe within the JPMorgan Investment Management line of business. Prior to JPMorgan, Mr Lava worked for Deloitte in Luxembourg focussing on external audit and consultancy work. He is a Board member of JPMorgan Asset Management (Europe) Sarl, and other Asset Management companies. Mr Lava holds a BA specialising in Finance from the University of Liege, and is a chartered accountant.

Mr Lava has left the Company and resigned from the Board with effect on 28th November 2018.

#### Jonathan Griffin

Mr. Griffin joined the Board of JPMCHL in June 2006. He is the chairman of JPMCHL and is managing director and CEO of JPMorgan Asset Management (Europe) Sarl ('JPMAME') in Luxembourg. Mr. Griffin has held various senior management positions within the JPMorgan group since joining the firm in 1986 and has worked in Germany, Japan, Luxembourg and the UK. JPMAME is an authorised UCITS and AIF Management Company with branches in eight European countries. JPMAME supervises the activities of JPMorgan's Luxembourg domiciled mutual fund ranges which are registered for distribution in over 30 countries worldwide. Mr Griffin has also been a Board member of ALFI (the Association of Luxembourg Mutual Funds) since 2007. Mr Griffin has left the Company and resigned from the Board with effect on 28<sup>th</sup> November 2018.

#### Frédéric Mouchel

Mr Mouchel is a Managing Director in JPMorgan Chase's Corporate & Investment Bank. He has relocated to Luxembourg in 2016 where he leads the Treasury Services Business. Prior to taking this role, Mr Mouchel was J.P. Morgan Europe Middle East and Africa ('EMEA') Treasurer. Over the last 20 years, Mr Mouchel has had held various management roles in the firm's Treasury function in the Investment Bank as well as in Finance and Corporate based first in Paris and since 2000 in London. He was EMEA Treasurer since early 2007. Before transferring to the front office and becoming Branch Treasurer for Paris in 1995, he held various positions mostly as a financial controller for market activities. He joined the firm in 1987. Frédéric graduated from Ecole Supérieure des Sciences Commerciales d'Angers - France ('ESSCA') in 1986.

Mr Mouchel has left the Company and resigned from the Board with effect on 28<sup>th</sup> November 2018.

#### Directorships

Members of the Board of Directors have also held internal and/or external directorships during the year ended 31<sup>st</sup> December 2018 as follows:

Name	Internal Directorships	External directorships
Fred Mouchel	1	0
Deborah Toennies	1	0
Jean-Jacques Lava	1	0
Jonathan Griffin	1	1
Dale Braithwait	1	0

*Note: Directorships held within the same group are counted as a single directorship, and those in organisations with non-commercial objectives are disregarded.*

### J.P. Morgan Financial Investment Limited

As at 31<sup>st</sup> December 2018, the JPMFIL Board is comprised of three directors. The directors are:

#### Stephen White, Chairman

Mr White joined the Board of J.P. Morgan Financial Investments Limited in September 2013. He is currently a Managing Director, and UK Controller, covering UK Legal Entity Control and UK Regulatory Reporting. Mr White has over 18 years of experience in

the Financial Services industry, working at institutions such as Tullett & Tokyo, HSBC, and Commerzbank AG. Prior to joining JPMorgan, Mr White worked for the Royal Bank of Scotland and ABN Amro as Head of UK Financial Reporting, and GBM Global Controller Change Director. Mr White is a fellow of the Association of Chartered Certified Accountants, and a member of the Association of Corporate Treasurers.

#### Louise Atherton-Miller

Mrs Atherton-Miller joined the Board of J.P. Morgan Financial Investments Limited in December 2017. She is an Executive Director and is the head of the EMEA Legal Entity Risk Governance Team. Mrs Atherton-Miller has over 33 years' experience in the Financial Services industry, working for several of J.P. Morgan's heritage firms including Manufacturers Hanover Trust Company, Chemical Bank and Chase Manhattan Bank.

#### John Hobson

Mr Hobson joined the Board of J.P. Morgan Financial Investments Limited in June 2017. He is currently an Executive Director and is the Luxembourg Senior Financial Officer. Prior to his current role, Mr Hobson was the UK Legal Entities Controller. Mr Hobson has over 20 years of Financial Services experience and has also worked for Barclays, the Royal Bank of Scotland and ABN Amro. Mr Hobson is a member of the Association of Chartered Certified Accountants.

#### Directorships

Members of the Board of Directors have also held internal and/or external directorships during the year ended 31<sup>st</sup> December 2018 as follows:

Name	Internal Directorships	External directorships
Stephen While	1	0
Louise Atherton-Miller	1	0
John Hobson	1	0

*Note: Directorships held within the same group are counted as a single directorship, and those in organisations with non-commercial objectives are disregarded*

### J.P. Morgan Mansart Management Limited

The JPMML Board is comprised of three directors. The directors are:

#### Shahzad Sadique

Mr Sadique joined JPMorgan in 2012, and was appointed as a director and Chief Executive Officer of JPMML in May of that year. He has over 20 years of experience in the Financial Services industry. Prior to joining J.P. Morgan, he was the Head of Morgan Stanley's structured and alternative fund business within their Investment Bank and was previously the co-Head of the retail structuring team for the multi-asset platform at Dresdner Bank. Mr Sadique began his career at Merrill Lynch in the global equity derivatives group. He holds a Master of Science in International Securities and Investment Banking from the ISMA Centre, University of Reading and a Bachelor of Arts in Financial Economics.

#### Matthew Melling

Mr Melling joined the Board of JPMML in May 2014. He is currently a Managing Director and the EMEA Regional Controller. Mr Melling joined JPMorgan in 1996 and has held a number of roles, including EMEA and Global Product Controller for Emerging Markets, and Credit and Emerging Markets Middle Office. He started his career in banking on the NatWest Graduate programme, before moving to Chase Manhattan, a heritage JPMorgan firm. Mr Melling holds a Bachelor of Science in Chemistry from King's College London.

#### Dale Braithwait

Mr Braithwait joined the Board of JPMML in March 2014. He is the J.P. Morgan group's global lead for Legal Entity Risk and the EMEA Chief Risk Office team. Mr Braithwait is a member of the EMEA Risk Committee and the EMEA Operating Committee. He is also a member of the Eurex Clearing Risk Committee. Mr Braithwait joined J.P. Morgan in 1997 and has held various roles relating to risk management, derivatives clearing, and fund administration, most recently as Global Head of Credit Clearing and Intermediation. During a period from 2003 to 2005, Mr. Braithwait left J.P. Morgan to set-up the Risk, Operations and Finance functions for a fund manager. Mr Braithwait holds a Bachelor of Science in Chemistry from Imperial College, London.

#### Directorships

Members of the Board of Directors have also held internal and/or external directorships during the year ended 31<sup>st</sup> December 2018 as follows:

Name	Internal Directorships	External directorships
Shahzad Sadique	1	3
Matthew Melling	1	0
Dale Braithwait	1	1

*Note: Directorships held within the same group are counted as a single directorship, and those in organisations with non-commercial objectives are disregarded*

## Diversity & Inclusion

The UK Entities have a disciplined focus on our workforce, workplace and marketplace - with management accountability as the foundation and element most critical to the ability to hire, train and retain great and diverse employees whose unique perspectives help realise the business objectives. The UK Entities are committed to a culture of openness and meritocracy, and believe in giving every individual an opportunity to succeed while bringing their whole selves to work.

In 2014 the Firm set an internal target to achieve 30% representation of women on certain key boards in EMEA. The Firm continues to make progress towards achieving this target across those boards and conducts a review on an annual basis.

Further information on the Firm's global Diversity and Inclusion strategy is available at: <https://www.jpmorgan.com/country/GB/en/emea/crd4>

### 3. Information on the scope of application of the regulatory framework (Article 436)

This section outlines differences between carrying values and regulatory exposure values. Firstly LI1 tables provide linkage of financial statements categories with regulatory risk categories. The row structure represents the same row structure of the balance sheet used in the annual report for 2018. The carrying amounts as reported in published financial statements are allocated to the different risk frameworks. The main sources of differences between carrying amounts as reported in published financial statements and regulatory exposure values are depicted in LI2 tables.

There are no differences between the scope of accounting consolidation and the scope of regulatory consolidation in the reporting entities.

Due to exemptions under Financial Reporting Standard ('FRS') 102, JPMFIL is not required to publish consolidated audited financial statements. Therefore the disclosures below are based on unaudited consolidated financial statements.

**Table 2: EU LI1 - The mapping of financial statement categories with regulatory risk categories for JPMCHL**

	Carrying values as reported in published financial statements	Carrying values of items (\$'mm)				
		Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework <sup>5</sup>	Not subject to capital requirements or subject to deduction from capital
Assets						
Cash and balances at central banks	29,881	29,881	—	—	—	—
Cash at bank and in hand	203	203	—	—	—	—
Loans and advances to banks	10,007	10,007	—	—	—	—
Loans and advances to customers	2,445	2,445	—	—	—	—
Securities purchased under resale agreements	156,793	—	156,793	—	—	—
Securities borrowed	44,939	—	44,939	—	—	—
Financial assets held at fair value through profit or loss	340,836	135	241,228	—	99,473	—
Financial assets designated at fair value through profit or loss	—	—	—	—	—	—
Other assets	83,684	14,680	41,804	—	27,200	—
Prepayments and accrued income	728	728	—	—	—	—
Goodwill	51	—	—	—	—	51
Intangible assets	—	—	—	—	—	—
Investments in JPMorgan Chase undertakings	—	—	—	—	—	—
Tangible fixed assets	13	13	—	—	—	—
Total Assets	669,580	58,092	484,764	—	126,673	51
Liabilities						
Deposits by banks	39	—	—	—	—	39
Customer accounts	6,889	—	—	—	—	6,889
Securities sold under agreements to repurchase	91,698	—	91,698	—	—	—
Securities loaned	20,417	—	20,417	—	—	—
Financial assets held at fair value through profit or loss	312,636	—	240,603	—	72,033	—
Financial assets designated at fair value through profit or loss	1,236	—	—	—	—	1,236
Other liabilities	174,632	—	26,618	—	26,282	121,732
Accruals and deferred income	2,012	—	—	—	—	2,012
Subordinates liabilities	12,004	—	—	—	—	12,004
Total liabilities	621,563	—	379,336	—	98,315	143,912

<sup>5</sup> The column represents only values which are subject to specific market risk.

Table 3: EU LI1 - The mapping of financial statement categories with regulatory risk categories for JPMFIL

	Carrying values under scope of regulatory consolidation <sup>6</sup>	Carrying values of items (\$'mm)				
		Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital
Assets						
Cash at bank and in hand	542	542	0	0	0	0
Debtors	455	454	0	0	1	0
Financial assets held for trading	20	0	19	0	1	0
Financial assets designated at fair value through profit or loss	10	10	0	0	0	0
Securities purchased under agreements to resell	4,481	0	4,481	0	0	0
Total Assets	5,508	1,006	4,500	—	2	—
Liabilities						
Creditors: amounts falling due within one year	167	0	0	0	2	165
Provisions for liabilities	45	0	0	0	0	45
Taxation	0	0	0	0	0	0
Financial liabilities held for trading	20	0	20	0	0	0
Total liabilities	232	—	20	—	2	210

Table 4: EU LI1 - The mapping of financial statement categories with regulatory risk categories for JPMML

	Carrying values as reported in published financial statements	Carrying values of items (\$'mm)				
		Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital
Assets						
Cash and cash equivalent	15	15	—	—	—	—
Debtors	1	1	—	—	—	—
Total Assets	16	16	—	—	—	—
Liabilities						
Creditors	3	—	—	—	—	3
Total liabilities	3	—	—	—	—	3

Table 5: EU LI2 - Main sources of differences between regulatory exposure amounts and carrying values in financial statements for JPMCHL

	Items subject to (\$'mm)		
	Credit risk framework	CCR framework	Securitisation framework
<b>Assets carrying value amount under the scope of regulatory consolidation (as per template EU LI1)</b>	58,092	484,763	—
Liabilities carrying value amount under the regulatory scope of consolidation (as per template EU LI1)	—	379,336	—
<b>Total net amount under the regulatory scope of consolidation</b>	58,092	105,427	—
Off-balance-sheet amounts	12,893	—	—
Differences due to Potential Future Credit Exposure (PFCE)	—	80,598	—
Differences due to different netting rules, haircuts, modelling and collateral usage	(13,328)	79,679	—
<b>Exposures amounts considered for regulatory purposes</b>	<b>57,657</b>	<b>265,704</b>	<b>—</b>

<sup>6</sup> JPMFIL is not required to publish consolidated audited financial statements (exemptions under FRS 102).

**Table 6: EU LI2 - Main sources of differences between regulatory exposure amounts and carrying values in financial statements for JMFIL**

	Items subject to (\$'mm)		
	Credit risk framework	CCR framework	Securitisation framework
<b>Assets carrying value amount under the scope of regulatory consolidation (as per template EU LI1)</b>	1,006	4,500	—
Liabilities carrying value amount under the regulatory scope of consolidation (as per template EU LI1)	—	20	—
<b>Total net amount under the regulatory scope of consolidation</b>	1,006	4,480	—
Differences due to Potential Future Credit Exposure (PFCE)	—	11	—
Differences due to different netting rules	—	(3,911)	—
Other	(107)	—	—
<b>Exposure amounts considered for regulatory purposes</b>	899	580	—

**Table 7: EU LI2 - Main sources of differences between regulatory exposure amounts and carrying values in financial statements for JPMMML**

	Items subject to (\$'mm)		
	Credit risk framework	CCR framework	Securitisation framework
<b>Assets carrying value amount under the scope of regulatory consolidation (as per template EU LI1)</b>	16	—	—
Liabilities carrying value amount under the regulatory scope of consolidation (as per template EU LI1)	—	—	—
<b>Total net amount under the regulatory scope of consolidation</b>	16	—	—
<b>Exposures amounts considered for regulatory purposes</b>	16	—	—

## Explanations of Differences Between Accounting and Regulatory Exposure Amounts

**Off-balance-sheet amounts:** Off-balance sheet items are subject to the regulatory framework. The exposures represent values after the application of the relevant credit conversion factors ('CCF').

**Difference due to Potential Future Credit Exposure ('PFCE'):** In order to determine exposure value for derivatives the PFCE is calculated as per article 274 of the CRR.

### Differences due to different netting rules, haircuts, modelling and collateral usage:

- The netting differences are due to legally enforceable netting agreements which cannot be applied in the same scope as for accounting framework which allows netting only if legal right of set-off exists and the cash flows are intended to be settled on a net basis. The netting rules also include the effect of Funded Credit Protection in the form of master netting agreements covering repurchase transactions.
- Collateral, haircuts and netting are taken into consideration when deriving exposures under the Internal Model Method ('IMM') for OTC derivatives.
- Exposures amounts considered for regulatory purposes are amounts before application of Credit Risk Mitigation ('CRM') but after application of regulatory netting requirements. The balance sheet includes collateral amounts therefore these values need to be excluded.

## 4. Own Funds (Article 437)

### Own Funds Disclosures

Capital resources represent the amount of regulatory capital available to an entity to cover all risks. Defined under the CRR, capital resources are designated into two tiers, Tier 1 and Tier 2. Tier 1 capital consists of Common Equity Tier 1 ('CET1') and Additional Tier 1 ('AT1'). CET1 is the highest quality of capital and for the entities for which this disclosure relates, is made up of share capital, reserves and audited profit; there is no AT1. Tier 2 capital consists of subordinated debt and other eligible capital instruments.

The Financial Stability Board ('FSB') Total Loss Absorbing Capacity ('TLAC') standard, issued in November 2015, specified minimum TLAC requirements for G-SIBs, including at the level of their material sub-groups. Within the EU and the UK, 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 target level for Minimum Requirement for own funds and Eligible Liabilities ('MREL'). Amendments to the EU MREL framework are currently being agreed through the finalisation of the CRD V/ BRRD II package. Both TLAC and MREL are intended to facilitate the resolution of a financial institution without causing financial instability and without recourse to public funds. The BoE published its updated Statement of Policy on its approach to setting MREL in June 2018. This included new requirements on the internal MREL resources to be held by UK material subsidiaries of overseas groups. In line with the FSB TLAC standard, these rules came into effect, on a transitional basis, from 1<sup>st</sup> January 2019, with full compliance required by 1<sup>st</sup> January 2022.

The information represented in the tables below constitutes the applicable data elements for Own Funds identified in Title VII of the Guidelines. The final column represents the capital position on a fully-phased in basis after all CRR transitional provisions have expired and phase-out of grandfathered capital instruments under pre-CRR national transposition measures is complete. Other capital impacts including instrument maturity or behavioural changes are not considered for the fully-phased in position.

### Key Changes During the Period

- **JPMCHL**
  - On 29th November 2018, J.P. Morgan International Bank Limited ('JPMIB') parent changed from JPMCHL to J.P. Morgan International Finance Limited ('JPMIF') which is incorporated in Delaware in the USA. The change in parent was a step in the wider plan to merge JPMIB and its branches with J.P. Morgan Bank Luxembourg SA ('JPMBL') which happened on 25th January 2019 by means of a cross border merger.
  - The total capital ratio has increased by 6.15% from 18.12% as at 31<sup>st</sup> December 2017 to 24.27%. The increase in the total capital ratio is driven by an increase in T2 and decreases in RWAs. The increase in Tier 2 capital was due to \$12bn of subordinated debt issued in December 2018 to meet MREL requirements which took effect from 1<sup>st</sup> January 2019. The movement in RWAs was driven by JPMIB restructure and by decreases in Counterparty Credit Risk ('CCR') due to derivatives.
- **JPMFIL**: No significant change in the capital structure during 2018.
- **JPMML**: No significant change in the capital structure during 2018.

Table 8: CRDIV Regulatory Capital for JPMCHL

Transitional Own Funds Funds Discourse Template (\$'mm)		Amount at Disclosure Date	Regulation (EU) No 575/2013 Article Reference	Fully-Phased in Position
<b>Common Equity Tier 1 capital: instruments and reserves</b>				
1	Capital instruments and the related share premium accounts	8,081	26 (1), 27, 28, 29, EBA list 26 (3)	8,081
	of which: Ordinary shares	8,081	EBA list 26 (3)	8,081
2	Retained earnings	30,610	26 (1) (c)	30,610
3	Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	9,326	26 (1)	9,326
6	<b>Common Equity Tier 1 (CET1) capital before regulatory adjustments</b>	48,017		48,017
<b>Common Equity Tier 1 (CET1) capital: regulatory adjustments</b>				
7	Additional value adjustments (negative amount)	(1,321)	34, 105	(1,321)
8	Intangible assets (net of related tax liability) (negative amount)	(51)	36 (1) (b), 37, 472 (4)	(51)
28	<b>Total regulatory adjustments to Common Equity Tier 1 (CET1)</b>	(1,372)		(1,372)
29	<b>Common Equity Tier 1 (CET1) capital</b>	46,645		46,645
<b>Additional Tier 1 (AT1) capital: Instruments</b>				
44	<b>Additional Tier 1 (AT1) capital</b>	—		—
45	<b>Tier 1 capital (T1 = CET1 + AT1)</b>	46,645		46,645
<b>Tier 2 (T2) capital: instruments and provisions</b>				
46	Capital instruments and the related share premium accounts	12,000	62, 63	12,000



Transitional Own Funds Funds Discourse Template (\$'mm)		Amount at Disclosure Date	Regulation (EU) No 575/2013 Article Reference	Fully-Phased in Position
51	Tier 2 (T2) capital before regulatory adjustments	12,000		12,000
57	Total regulatory adjustments to Tier 2 (T2) capital	—		—
58	Tier 2 (T2) capital	12,000		12,000
59	Total capital (TC = T1 + T2)	58,645		58,645
60	Total risk weighted assets	241,615		241,615
<b>Capital ratios and buffers</b>				
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	19.31%	92 (2) (a), 465	19.31%
62	Tier 1 (as a percentage of total risk exposure amount)	19.31%	92 (2) (b), 465	19.31%
63	Total capital (as a percentage of total risk exposure amount)	24.27%	92 (2) (c)	24.27%
64	Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus systemically important institution buffer (G-SII or O-SII buffer) expressed as a percentage of risk exposure amount)	6.57%	CRD 128, 129, 130	7.19%
65	of which: capital conservation buffer requirement	1.87%		2.50%
66	of which: countercyclical buffer requirement	0.19%		0.19%
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	13.31%	CRD 128	13.31%
<b>Amounts below the thresholds for deduction (before risk weighting)</b>				
72	Direct and indirect holdings of the capital of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	3,573	36 (1) (h), 46, 45, 472 (10), 56 (c), 59, 60, 475 (4), 66 (c), 69, 70, 477 (4)	3,573
73	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	275	36 (1) (i), 45, 48, 470, 472 (11)	275
75	Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met)	104	36 (1) (c), 38, 48, 470, 472 (5)	104

Table 9: CRDIV Regulatory Capital for JPMFIL

Transitional Own Funds Funds Discourse Template (\$'mm)		Amount at Disclosure Date	Regulation (EU) No 575/2013 Article Reference	Fully-Phased in Position
<b>Common Equity Tier 1 capital: instruments and reserves</b>				
1	Capital instruments and the related share premium accounts	3	26 (1), 27, 28, 29, EBA list 26 (3)	3
	of which: Ordinary shares	3	EBA list 26 (3)	3
2	Retained earnings	(25)	26 (1) (c)	(25)
3	Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	5,169	26 (1)	5,169
6	Common Equity Tier 1 (CET1) capital before regulatory adjustments	5,147		5,147
<b>Common Equity Tier 1 (CET1) capital: regulatory adjustments</b>				
7	Additional value adjustments (negative amount)	(6)	34, 105	(6)
28	Total regulatory adjustments to Common Equity Tier 1 (CET1)	(6)		(6)
29	Common Equity Tier 1 (CET1) capital	5,141		5,141
<b>Additional Tier 1 (AT1) capital: Instruments</b>				
44	Additional Tier 1 (AT1) capital	—		—
45	Tier 1 capital (T1 = CET1 + AT1)	5,141		5,141
<b>Tier 2 (T2) capital: instruments and provisions</b>				
58	Tier 2 (T2) capital	—		—
59	Total capital (TC = T1 + T2)	5,141		5,141
60	Total risk weighted assets	734		734
<b>Capital ratios and buffers</b>				
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	700.58%	92 (2) (a), 465	700.58%
62	Tier 1 (as a percentage of total risk exposure amount)	700.58%	92 (2) (b), 465	700.58%
63	Total capital (as a percentage of total risk exposure amount)	700.58%	92 (2) (c)	700.58%

Transitional Own Funds Funds Discourse Template (\$'mm)		Amount at Disclosure Date	Regulation (EU) No 575/2013 Article Reference	Fully-Phased in Position
64	Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus systemically important institution buffer (G-SII or O-SII buffer) expressed as a percentage of risk exposure amount)	6.97%	CRD 128, 129, 130	7.59%
65	of which: capital conservation buffer requirement	1.87%		2.50%
66	of which: countercyclical buffer requirement	0.59%		0.59%
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	692.58%	CRD 128	692.58%

Table 10: CRDIV Regulatory Capital for JPMML

\$'mm		Amount at Disclosure Date	Regulation (EU) No 575/2013 Article Reference	Fully-Phased in Position
<b>Common Equity Tier 1 capital: instruments and reserves</b>				
1	Capital instruments and the related share premium accounts	25	26 (1), 27, 28, 29, EBA list 26 (3)	25
	of which: Ordinary shares	25	EBA list 26 (3)	25
2	Retained earnings	(11)	26 (1) (c)	(11)
3	Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	—	26 (1)	—
6	<b>Common Equity Tier 1 (CET1) capital before regulatory adjustments</b>	14		14
<b>Common Equity Tier 1 (CET1) capital: regulatory adjustments</b>				
28	<b>Total regulatory adjustments to Common Equity Tier 1 (CET1)</b>	—		—
29	<b>Common Equity Tier 1 (CET1) capital</b>	14		14
<b>Additional Tier 1 (AT1) capital: Instruments</b>				
43	<b>Total regulatory adjustments to Additional Tier 1 (AT1) capital</b>	—		—
44	<b>Additional Tier 1 (AT1) capital</b>	—		—
45	<b>Tier 1 capital (T1 = CET1 + AT1)</b>	14		14
<b>Tier 2 (T2) capital: instruments and provisions</b>				
58	<b>Tier 2 (T2) capital</b>	—		—
59	<b>Total capital (TC = T1 + T2)</b>	14		14
60	<b>Total risk weighted assets</b>	13		13
<b>Capital ratios and buffers</b>				
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	107.94%	92 (2) (a), 465	107.94%
62	Tier 1 (as a percentage of total risk exposure amount)	107.94%	92 (2) (b), 465	107.94%
63	Total capital (as a percentage of total risk exposure amount)	107.94%	92 (2) (c)	107.94%

## Own Funds Reconciliation

The tables below present a reconciliation between audited balance sheet own funds and regulatory own funds as at 31<sup>st</sup> December 2018 in accordance with the requirements set out in Commission Implementing Regulation (EU) No 1423/2013.

**Table 11: Reconciliation of Regulatory Own Funds to Balance Sheet for JPMCHL**

Regulatory Own Funds Reconciliation to Balance Sheet	Reference	\$'mm
<b>CET1 Capital</b>		
406,909,774 Ordinary Shares of \$10 each	Accounts Note 32	4,069
Share Premium Account	Accounts Page 47	4,012
Pension Reserve	Accounts Page 47	(73)
Capital contribution reserve	Accounts Page 47	8,977
Other Reserves	Accounts Page 47	422
Retained Earnings	Accounts Page 47	30,610
<b>CET1 Capital - Balance Sheet Own Funds</b>		48,017
<i>Less Regulatory Adjustments</i>		
(-) Intangible Assets Goodwill	Accounts Note 21	(51)
(-) Additional Valuation Adjustments	CRR Article 34	(1,321)
<b>CET1 Capital - Regulatory Own Funds After Adjustments</b>		46,645
<b>T2 Capital</b>		
<b>Subordinated Loan (maturity 17/12/2028)</b>		12,000
<b>T2 Capital - Balance Sheet Own Funds</b>		12,000
<b>T2 Capital - Regulatory Own Funds After Adjustments</b>		12,000
<b>Total Regulatory Own Funds</b>		58,645

**Table 12: Reconciliation of Regulatory Own Funds to Balance Sheet for JPMFIL**

Regulatory Own Funds Reconciliation to Balance Sheet	\$'mm
<b>CET1 Capital</b>	
1,600,002 Ordinary Shares of £1 each	3
Share Premium Account	—
Other Reserves	5,169
Retained Earnings	104
<b>CET1 Capital - Balance Sheet Own Funds</b>	5,276
<i>Less Regulatory Adjustments</i>	
(-) Unaudited Profit	(129)
(-) Additional Valuation Adjustments	(6)
<b>CET1 Capital - Regulatory Own Funds After Adjustments</b>	5,141
<b>Total Regulatory Own Funds</b>	5,141

**Table 13: Reconciliation of Regulatory Own Funds to Balance Sheet for JPMMLL**

Regulatory Own Funds Reconciliation to Balance Sheet	Reference	\$'mm
<b>CET1 Capital</b>		
1 Ordinary Share of £1	Accounts Note 16	—
25,000,000 Ordinary Shares of \$1 Each	Accounts Note 16	25
Retained earnings	Accounts Page 15	-11
Accumulated other comprehensive income	Accounts Page 15	—
<b>CET1 Capital - Balance Sheet Own Funds</b>		14
<b>CET1 Capital - Regulatory Own Funds After Adjustments</b>		14
<b>Total Regulatory Own Funds</b>		14

## Main Features of Capital Instruments

The tables below present the main features of regulatory capital instruments for the in scope entities as at 31<sup>st</sup> December 2018 required by Commission Implementing Regulation (EU) No 1423/2013. The terms and conditions can be found on the Companies House website.

**Table 14: Main Features of Regulatory Capital Instruments**

Capital Instruments Main Features		JPMCHL		JPMFIL	JPMML	
		CET1	T2	CET1	CET1	CET1
		\$10 ordinary shares	\$ 12,000 mm subordinated loan	£1 ordinary shares	£1 ordinary shares	\$1 ordinary shares
1	Issuer	JPMCHL	JPMCHL	JPMFIL	JPMML	JPMML
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	Private Placement	Internal issuance	Private Placement	Private Placement	Private Placement
3	Governing law(s) of the instrument	The Companies Act 2006	English Law	The Companies Act 2006	The Companies Act 2006	The Companies Act 2006
<b>Regulatory treatment</b>						
4	Transitional CRR rules	Common Equity Tier 1	Tier 2	Common Equity Tier 1	Common Equity Tier 1	Common Equity Tier 1
5	Post-transitional CRR rules	Common Equity Tier 1	Tier 2	Common Equity Tier 1	Common Equity Tier 1	Common Equity Tier 1
6	Eligible at solo/(sub-)consolidated/ solo&(sub-)consolidated	(sub-)consolidated	(sub-)consolidated	(sub-)consolidated	Solo	Solo
7	Instrument type (types to be specified by each jurisdiction)	\$ Ordinary	\$ Subordinated Notes/ Loan	£ Ordinary	£ Ordinary	\$ Ordinary
8	Amount recognised in regulatory capital (Currency in million, as of most recent reporting date). Includes issued paid up share capital and share premium	\$8,081 includes nominal and premium	\$12,000	£1.6	£0	25
9	Nominal amount of instrument	\$10	\$12,000,000,000	£1	£1	\$1
9a	Issue price	average issue price \$20	\$12,000,000,000	£1	£1	\$1
9b	Redemption price	N/A	1	N/A	N/A	N/A
10	Accounting classification	Shareholders' equity	Liability - amortised cost	Shareholders' equity	Shareholders' equity	Shareholders' equity
11	Original date of issuance (issued paid up share capital)	\$0.2m Nov 18 1999 \$2,000m Jan 25 2000 \$959m Nov 2 2000 \$1,110m Apr 9 2002 \$0.01m Dec 12 2006 \$0.01m Mar 7 2007	\$12,000m Dec 17 2018	£1.6m March 12 1999	£0.000001m Nov 7 2007	\$25m Oct 22 2012
12	Perpetual or dated	Perpetual	Dated	Perpetual	Perpetual	Perpetual
13	Original maturity date	No maturity	December 17 2018	No maturity	No maturity	No maturity
14	Issuer call subject to prior supervisory approval	No	Yes	No	No	No
15	Optional call date, contingent call dates and redemption amount	N/A	N/A	N/A	N/A	N/A
16	Subsequent call dates, if applicable	N/A	N/A	N/A	N/A	N/A

Capital Instruments Main Features		JPMCHL		JPMFIL	JPMMML	
		CET1	T2	CET1	CET1	CET1
		\$10 ordinary shares	\$ 12,000 mm subordinated loan	£1 ordinary shares	£1 ordinary shares	\$1 ordinary shares
<b>Coupons / dividends</b>						
17	Fixed or floating dividend/coupon	N/A	Floating	N/A	N/A	N/A
18	Coupon rate and any related index	N/A	1M USD Libor + 1.55%	N/A	N/A	N/A
19	Existence of a dividend stopper	No	No	No	No	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Full discretionary	Mandatory	Full discretionary	Full discretionary	Full discretionary
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Full discretionary	Mandatory	Full discretionary	Full discretionary	Full discretionary
21	Existence of step up or other incentive to redeem	No	No	No	No	No
22	Noncumulative or cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible	Non-cumulative	Non-convertible	Non-convertible	Non-convertible
24	If convertible, conversion trigger(s)	N/A	N/A	N/A	N/A	N/A
25	If convertible, fully or partially	N/A	N/A	N/A	N/A	N/A
26	If convertible, conversion rate	N/A	N/A	N/A	N/A	N/A
27	If convertible, mandatory or optional conversion	N/A	N/A	N/A	N/A	N/A
28	If convertible, specify instrument type convertible into	N/A	N/A	N/A	N/A	N/A
29	If convertible, specify issuer of instrument it converts into	N/A	N/A	N/A	N/A	N/A
30	Write-down features	N/A	N/A	N/A	N/A	N/A
31	If write-down, write-down trigger(s)	N/A	N/A	N/A	N/A	N/A
32	If write-down, full or partial	N/A	N/A	N/A	N/A	N/A
33	If write-down, permanent or temporary	N/A	N/A	N/A	N/A	N/A
34	If temporary write-down, description of write-up mechanism	N/A	N/A	N/A	N/A	N/A
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	One class of share & same rights attached to all shares	Unsecured and Subordinated Creditors	One class of share & same rights attached to all shares	Ranks pari passu	Ranks pari passu
36	Non-compliant transitioned features	No	No	No	No	No
37	If yes, specify non-compliant features	N/A	N/A	N/A	N/A	N/A

## 5. Capital Requirements (Article 438)

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables the Firm to build and invest in market-leading businesses, even in a highly stressed environment.

### Internal Capital Adequacy Assessment Process

The entities in scope complete an ICAAP on a periodic basis, which provides management with a view of the impact of severe and unexpected events on earnings, risk-weighted assets and capital. The Company's ICAAP integrates stress testing protocols with capital planning. The process assesses the potential impact of alternative economic and business scenarios on the Company's earnings, capital resources, risk-weighted assets and balance sheet. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the entities in scope. However, when defining a broad range of scenarios, realized events can always be worse. ICAAP results are reviewed by management and the relevant Board of Directors.

### Minimum Capital Requirements

The tables below show a breakdown of the RWA and associated Minimum Capital Requirements for JPMCHL, JPMFIL and JPMML. The standardised approach has been used for the calculation of credit risk. The Mark-to-Market Method ('MtM') and IMM have been employed to calculate OTC derivative exposure in CCR. Market Risk Capital Requirements have been measured by using a combination of the standardised approach and internal models including Value-at-Risk (VaR) approved by the PRA. The Basic Indicator Approach ('BIA') has been used for the calculation of Operational Risk Capital Requirements.

The minimum capital requirements below represent the Pillar 1 requirements as per the CRR. It does not include additional minimum requirements set out by the PRA or FCA as part of the Company's Individual Capital Guidance ('ICG').

### Key Changes during the Period

- **JPMCHL:**
  - Credit risk (excluding CCR) decreased primarily due to the reclassification from credit risk to CCR for excess pledged collateral on trading book derivatives and Securities Financing Transactions ('SFTs'); and due to the change in JPMIB's parent from JPMCHL to JPMIF.
  - Exposures to SFTs increased due to Fixed Income Financing business.
  - IMM was introduced to calculate derivative exposures in Q1 2018 following the PRA permission which covers only non-cleared OTC derivatives. The IMM implementation has resulted in the RWAs reduction in CCR and CVA.
  - The increase in market risk capital requirements under IMA is driven by the expansion of IMA scope to include additional business lines.
- **JPMFIL:** No significant changes in RWAs during 2018.
- **JPMML:** No significant changes in RWAs during 2018.

Table 15: EU OV1 - Overview of RWAs for JPMCHL<sup>7</sup>

\$'mm			RWA		Minimum capital requirements
			Q4 2018	Q4 2017	
	1	<b>Credit risk (excluding CCR)</b>	20,734	32,805	1,659
Article 438(c)(d)	2	Of which the standardised approach	20,734	32,805	1,659
Article 107 and Article 438(c)(d)	6	<b>CCR</b>	111,156	121,113	8,892
Article 438(c)(d)	7	Of which mark to market	26,063	59,914	2,085
	10	Of which internal model method (IMM)	19,731	—	1,578
Article 438(c)(d)	11	Of which risk exposure amount for contributions to the default fund of a CCP	86	84	7
Article 438(c)(d)	12	Of which CVA	8,771	30,109	702
Article 438(e)	13	<b>Settlement risk</b>	357	654	29
Article 438(e)	19	<b>Market risk</b>	92,500	84,477	7,400
	20	Of which the standardised approach	79,256	77,666	6,340
	21	Of which IMA	13,244	6,811	1,060
Article 438(f)	23	<b>Operational risk</b>	16,579	15,956	1,326
	24	Of which basic indicator approach	16,579	15,956	1,326
Article 437(2), Article 48 and Article 60	27	<b>Amounts below the thresholds for deduction (subject to 250% risk weight)</b>	289	468	23
	29	<b>Total</b>	241,615	255,473	19,329

<sup>7</sup> The exposure value to SFTs is included under CCR in table EU OV1, it is not shown in the CCR breakdown, as in line with the prescribed template.

Table 16: EU OV1 - Overview of RWAs for JPMFIL

\$'mm			RWA		Minimum capital requirements
			Q4 2018	Q4 2017	
	1	<b>Credit risk (excluding CCR)</b>	487	480	39
Article 438(c)(d)	2	Of which the standardised approach	487	480	39
Article 107 and Article 438(c)(d)	6	<b>CCR</b>	53	36	4
Article 438(c)(d)	7	Of which mark to market	4	16	—
Article 438(c)(d)	12	Of which CVA	13	15	1
Article 438 (e)	19	<b>Market risk</b>	—	17	—
	20	Of which the standardised approach	—	17	—
Article 438(f)	23	<b>Operational risk</b>	194	75	16
	24	Of which basic indicator approach	194	75	16
	29	<b>Total</b>	734	608	59

Table 17: EU OV1 - Overview of RWAs for JPMML<sup>8</sup>

\$'mm			RWA		Minimum capital requirements
			Q4 2018	Q4 2017	
	1	<b>Credit risk (excluding CCR)</b>	5	5	1
Article 438(c)(d)	2	Of which the standardised approach	5	5	1
Article 438(e)	19	<b>Market risk</b>	1	—	—
	20	Of which the standardised approach	1	—	—
	29	<b>Total</b>	6	5	1

The table below shows a breakdown of the minimum capital requirements for Credit Risk (including Counterparty Credit Risk) by exposure class.

Table 18: EU OV1 additional - Overview of RWAs by exposure class

Exposure classes (\$'mm)		JPMCHL		JPMFIL		JPMML	
		RWA	Capital requirement	RWA	Capital requirement	RWA	Capital requirement
1	Central governments or central banks	5,797	464	—	—	—	—
2	Regional governments or local authorities	35	3	—	—	—	—
3	Public sector entities	357	29	—	—	—	—
4	Multilateral Development Banks	78	6	—	—	—	—
5	International Organisations	—	—	—	—	—	—
6	Institutions	24,411	1,953	403	32	3	1
7	Corporates	62,006	4,960	65	5	2	—
10	Exposures in default	160	13	—	—	—	—
11	Items associated with particularly high risk	29,319	2,346	—	—	—	—
15	Equity exposures	205	16	14	1	—	—
16	Other exposures	954	76	45	4	—	—
17	<b>Total</b>	123,322	9,866	527	42	5	1

## Total Capital Requirements

In accordance with PRA Supervisory Statement SS31/15 the firm is now required to disclose the Total Capital Requirements ('TCR'). TCR is the sum of Pillar 1 and Pillar 2A capital requirements. The requirement is only applicable for firms at the highest level of consolidation in the UK regulated by the PRA.

Table 19: Total Capital Requirements

\$'mm	JPMCHL
Total capital requirements	26,664

<sup>8</sup> The additional risk exposure amount due to fixed overheads is \$7mm. Therefore the total RWAs amount is \$13mm.

## 6. Exposure to Counterparty Credit Risk (Article 439)

### Internal Capital and Credit Limits for Counterparty Credit Exposures

The Firm expresses counterparty credit exposure using the several measures of potential future exposure using Monte-Carlo methods. Monte-Carlo simulation models generate mark-to-market distributions for a portfolio of financial instruments under various future market states. This calculation takes into account the effects of credit risk mitigants, such as close-out netting and collateral agreements.

To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ('DRE'), and Average exposure ('AVG'). These measures all incorporate netting and collateral benefits, where applicable.

Peak represents a conservative measure of potential exposure to a counterparty calculated in a manner that is broadly equivalent to a 97.5% confidence level over the life of the transaction. Peak is the primary measure used by the Firm for setting of credit limits for derivative transactions, senior management reporting and derivatives exposure management. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. DRE is a less extreme measure of potential credit loss than Peak and is used for aggregating derivative credit risk exposures with loans and other credit risk. Finally, AVG is a measure of the expected fair value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit risk capital and the CVA.

CVA is based on the Firm's AVG to counterparty and the counterparty's credit spread in the credit derivatives market. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's risk management process takes into consideration the potential impact of wrong-way risk, which is broadly defined as the potential for increased correlation between the Firm's exposure to a counterparty (AVG) and the counterparty's credit quality. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with that counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

For SFTs, the Firm uses Securities Risk Equivalent, a measure conceptually close to DRE.

In order to assess the internal credit capital required to support its business in the event of unexpected credit losses, the Firm uses Economic Capital. To compute Economic Capital, the loss distribution for the wholesale portfolio is calculated by running Monte-Carlo simulations using J.P. Morgan's Proprietary Capital Model with a one-year horizon. The principal drivers of portfolio capital are:

- The risk characteristics of individual exposures; and
- The correlations among different borrowers.

Portfolio capital is allocated to each exposure using a formula based on the exposure's Risk Grade, Probability of Default ('PD'), Loss Given Default ('LGD'), Loan Equivalent exposure amount, and tenor.

### Policies for Securing Collateral and Establishing Credit Reserves

Entities in scope are covered by firmwide policies relating to the type of acceptable collateral posted in support of all forms of credit exposure. Cash and certain high quality bonds are generally considered acceptable collateral.

The receipt of collateral to secure credit exposures is reflected through the LGD estimate at the facility level for traditional credit products and through the expected exposure estimate for Over the Counter ('OTC') derivatives and repo-style transactions. The existence of guarantees is reflected in the internal risk grade assigned to the exposure, if the guarantee meets certain documentation standards and provides acceptable coverage of the obligor's indebtedness and economic and political risks. To address residual risk related to collateral and guarantees, the Firm has instituted policies to assess and monitor the enforceability and effectiveness of these credit risk mitigants.

### Wrong-Way Risk Policies

The firm may be exposed to additional credit risk as a result of the wrong way nature of certain OTC derivatives, Cleared Derivatives and securities financing trades, or the wrong way nature of collateral taken against these trades. Accordingly J.P. Morgan has established a credit policy that defines the CIB governance framework and additional controls to cover specific and general wrong way risk. Specific wrong-way OTC derivatives and securities financing trades have conservative credit exposure assigned which would lead to higher CVA and economic credit capital being much higher than for unrelated trades.

Compared with Specific Wrong Way ('SWW') risk, General Wrong Way ('GWW') risk tends to require a more subjective assessment of the correlation between the exposure drivers on a transaction and the counterparty's credit worthiness. This is where potential exposure on a transaction has material correlation to the counterparty's creditworthiness, but without there being a direct or legal connection.



## Impact of Credit Rating Downgrade

The impact of a downgrade in the Firm's credit rating is considered in the JPMorgan Chase & Co. SEC 10-K filing, at a firmwide level. Credit rating downgrade analysis is incorporated within the liquidity risk metrics for JPMCHL's key entities.

The following table shows the potential impact of a single-notch and two-notch downgrade of the long-term credit rating of JPMS plc, at 31<sup>st</sup> December 2018, related to OTC derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined threshold rating is breached:

**Table 20: Impact of credit rating downgrade on collateral**

\$'mm	Single-notch downgrade	Two-notch downgrade
Non-cumulative outflow	13	345

## Counterparty Credit Risk Analysis

The table below shows counterparty credit risk exposures (excluding trades cleared through a CCP) by methods used to calculate CRR regulatory requirements for JPMCHL. Counterparty credit risk exposures are calculated under the standardised approaches set out in the CRR. Derivative exposures are calculated using the MtM method (CRR Article 274) and the IMM (CRR Article 283). SFTs use the Financial Collateral Comprehensive Method ('FCCM') (CRR Article 223). Long settlement transactions are treated under the FCCM method.

**Table 21: EU CCR1 - Analysis of CRR exposure by approach for JPMCHL**

	\$'mm	Replacement cost/current market value	Potential future credit exposures	EEPE	Multiplier	EAD post CRM	RWAs
1	Mark to market	4,098	44,875			48,864	24,812
4	IMM (for derivatives and SFTs)			18,737	1.4	26,232	19,731
6	Of which derivatives and long settlement transactions			18,737	1.4	26,232	19,731
9	Financial collateral comprehensive method (for SFTs)					86,927	56,363
11	<b>Total</b>						<b>100,906</b>

**Table 22: EU CCR1 - Analysis of CRR exposure by approach for JPMFIL**

	\$'mm	Replacement cost/current market value	Potential future credit exposures	EAD post CRM	RWAs
1	Mark to market	20	11	30	4
9	Financial collateral comprehensive method (for SFTs)			73	36
11	<b>Total</b>				<b>40</b>

The flow statements explaining changes in the CCR RWAs determined under the IMM are depicted in the table below.

**Table 23: EU CCR7 - RWA flow statements of CCR exposures under the IMM for JPMCHL**

	\$'mm	RWA	Capital requirements
1	<b>RWAs as at the end of the previous reporting period (1st January 2018)</b>	—	—
i	Model implementation	22,767	1,821
2	Asset size	(3,020)	(242)
3	Credit quality of counterparties	139	12
4	Model updates (IMM only)	—	—
5	Methodology and policy (IMM only)	(83)	(7)
6	Acquisitions and disposals	—	—
7	Foreign exchange movements	—	—
8	Other <sup>9</sup>	(72)	(6)
9	<b>RWAs as at the end of the current reporting period (31st December 2018)</b>	<b>19,731</b>	<b>1,578</b>

<sup>9</sup> Includes changes in Specific Wrong Way Risk ('SWWR').

The following table represents an overview of the impact of netting and collateral held on exposures for derivatives (including long settlement transactions) and SFTs. The collateral held includes supervisory volatility adjustments.

**Table 24: EU CCR5-A - Impact of netting and collateral held on exposure values for JPMCHL**

\$'mm	Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held <sup>10</sup>	Net credit exposure
Derivatives <sup>11</sup>	241,615	(171,109)	70,506	(31,588)	38,918
SFTs subject to a netting agreement	525,274	(363,856)	161,418	(70,119)	91,299
SFTs not subject to a netting agreement	6,078	—	6,078	(3,440)	2,638
Non-eligible collateral under the CRR <sup>12</sup>				(12,189)	
<b>Total</b>	<b>772,967</b>	<b>(534,965)</b>	<b>238,002</b>	<b>(105,147)</b>	<b>132,855</b>

**Table 25: EU CCR5-A - Impact of netting and collateral held on exposure values for JPMFIL**

\$'mm	Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
Derivatives	20	—	20	(1)	19
SFTs subject to a netting agreement	4,037	—	4,037	(3,968)	70
SFTs not subject to a netting agreement	396	—	396	(393)	4
<b>Total</b>	<b>4,453</b>	<b>—</b>	<b>4,453</b>	<b>(4,362)</b>	<b>93</b>

## Collateral Used in Counterparty Credit Risk

The breakdown of all types collateral posted or received by JPMCHL and JPMFIL to mitigate CCR exposure to derivatives and SFTs is shown in the tables below. As at 31<sup>st</sup> December 2018, the majority of collateral used was in cash while the rest was in equities and high quality bonds.

**Table 26: EU CCR5-B - Composition of collateral for exposures to CCR for JPMCHL<sup>13</sup>**

\$'mm	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
	Segregated	Unsegregated	Segregated	Unsegregated		
Cash	—	55,265	—	74,970	43,414	15,570
Debt securities (Central Governments)	—	1,017	—	969	—	6,102
Debt securities (Corporates)	—	19,690	—	1,706	2,909	13,795
Debt securities (Institutions)	—	5,429	—	11,905	5,801	2,176
Equities	—	445	—	1	24,924	39,516
Convertible securities	—	—	—	—	970	1,357
CIUs	—	—	—	—	1,799	1,058
Other	—	1	—	—	41	38
<b>Total</b>	<b>—</b>	<b>81,847</b>	<b>—</b>	<b>89,551</b>	<b>79,858</b>	<b>79,612</b>

**Table 27: EU CCR5-B - Composition of collateral for exposures to CCR for JPMFIL**

\$'mm	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
	Segregated	Unsegregated	Segregated	Unsegregated		
Cash	—	1	—	1	—	—
Debt securities (Central Governments)	—	—	—	—	1,762	—
Debt securities (Corporates)	—	—	—	—	2,972	—
Debt securities (Institutions)	—	—	—	—	88	—
<b>Total</b>	<b>—</b>	<b>1</b>	<b>—</b>	<b>1</b>	<b>4,822</b>	<b>—</b>

<sup>10</sup> Includes supervisory volatility adjustments and excludes collateral for OTC derivative exposures under IMM.

<sup>11</sup> The prudent valuation adjustments are deducted from the regulatory capital but they are not used to calculate the derivative credit exposure, therefore the balances represent values before the application of the prudent valuation adjustments.

<sup>12</sup> Non-eligible collateral does not include supervisory volatility adjustments.

<sup>13</sup> The table includes both eligible and non-eligible collateral before application of supervisory volatility adjustments.

## CVA Capital Charge

The exposure value and associated RWAs subject to CVA capital charges are calculated according to both the Advanced method as set in CRR Article 383 and the Standardised method as prescribed in CRR Article 384.

**Table 28: EU CCR2 - CVA capital charge**

\$'mm		JPMCHL		JPMFIL	
		Exposure value	RWA	Exposure value	RWA
1	Total portfolios subject to the advanced method	11,279	6,088	—	—
2	(i) VaR component (including the 3× multiplier)		1,510		—
3	(ii) SVaR component (including the 3× multiplier)		4,578		—
4	All portfolios subject to the standardised method	5,691	2,683	28	13
5	Total subject to the CVA capital charge	16,970	8,771	28	13

## Exposure to CCPs

The following table shows a comprehensive picture of JPMCHL's exposures to CCPs. JPMCHL does not have any exposure to non-QCCPs<sup>14</sup>. The exposure amount for default funds contributions is calculated as per Article 308 of CRR. JPMFIL and JPMML do not clear via CCPs.

**Table 29: EU CCR8 - Exposures to CCPs**

\$'mm		EAD post CRM	RWAs
1	<b>Exposures to QCCPs (total)</b>		1,477
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	68,273	1,377
3	(i) OTC derivatives	37,683	754
4	(ii) Exchange-traded derivatives	23,580	483
5	(iii) SFTs	7,010	140
7	Segregated initial margin <sup>15</sup>	—	
8	Non-segregated initial margin	685	14
9	Prefunded default fund contributions	838	86
11	<b>Exposures to non-QCCPs (total)</b>		—

## Credit Derivatives Breakdown

The table below presents a breakdown of credit derivatives notional for JPMCHL by product type and whether they are held for client intermediation (other credit derivatives) or for the firm's own portfolio (credit derivative hedges). The firm makes limited use of credit derivatives hedges for the purpose of credit risk mitigation as disclosed in Section 18. Credit derivatives trading activity is only carried out within the JPMS plc.

**Table 30: EU CCR6 - Credit derivatives exposures for JPMCHL**

\$'mm	Credit derivative hedges		Other credit derivatives
	Protection bought	Protection sold	
Notionals			
Credit default swaps	—	—	1,204,198
Total return swaps	22,818	—	5,939
Total notionals	22,818	—	1,210,137
Fair values			
Positive fair value (asset)	—	—	15,415
Negative fair value (liability)	(6,887)	—	(13,892)

<sup>14</sup> QCCP (qualifying central counterparty) means a central counterparty that has been either authorised in accordance with Article 14 of Regulation (EU) No 648/ 2012 or recognised in accordance with Article 25 of that Regulation.

<sup>15</sup> For regulatory purposes all segregated margin is treated as non-segregated.

## 7. Countercyclical Capital Buffers (Article 440)

Under Basel III, each firm is required to hold an additional capital buffer against macroeconomic risks associated with an increase in aggregate credit. Each firm is required to calculate its institution-specific countercyclical buffer rate as a weighted average of the buffer rates that have been set for each jurisdiction to which the firm has relevant credit exposures. The countercyclical buffer is then the institution-specific countercyclical buffer rate multiplied by total RWA. JPMMML as an IFPRU limited licence firm is not required to hold a countercyclical capital buffer (CRR Article 95)<sup>16</sup>.

**Table 31: Geographic Distribution of Credit Exposures Relevant to the Calculation of the Countercyclical Capital Buffer for JPMCHL**

Breakdown by country (\$'mm)	General credit exposures	Trading book exposure		Own funds requirements			Own funds requirement weights	Countercyclical capital buffer rate
	Exposure value for SA	Sum of long and short position of trading book	Value of trading book exposure for internal models	Of which: General credit exposures	Of which: Trading book exposures	Total		
United Kingdom	11,909	2,840	—	933	305	1,238	12.55%	1.000%
Sweden	1,587	121	—	124	11	135	1.36%	2.000%
Hong Kong	1,408	55	—	113	17	130	1.32%	1.880%
Norway	870	149	—	51	5	56	0.57%	2.000%
Czech Republic	47	9	—	4	1	4	0.04%	1.000%
Iceland	16	38	—	1	3	4	0.04%	1.250%
Slovakia	5	—	—	—	—	—	0.00%	1.250%
Lithuania	—	—	—	—	—	—	0.00%	0.500%
Other Countries	331,810	14,104	1	7,344	2,449	9,792	99.34%	0.000%
<b>Total</b>	<b>347,652</b>	<b>17,316</b>	<b>1</b>	<b>8,570</b>	<b>2,791</b>	<b>11,359</b>	<b>100.00%</b>	

**Table 32: Geographic Distribution of Credit Exposures Relevant to the Calculation of the Countercyclical Capital Buffer for JPMFIL**

Breakdown by country (\$'mm)	General credit exposures	Trading book exposure		Own funds requirements			Own funds requirement weights	Countercyclical capital buffer rate
	Exposure value for SA	Sum of long and short position of trading book	Value of trading book exposure for internal models	Of which: General credit exposures	Of which: Trading book exposures	Total		
United Kingdom	65	—	—	5	—	5	59.14%	1.000%
Other Countries	1,405	—	—	4	—	4	40.86%	0.000%
<b>Total</b>	<b>1,470</b>	<b>—</b>	<b>—</b>	<b>9</b>	<b>—</b>	<b>9</b>	<b>100.00%</b>	

**Table 33: Amount of Institution-Specific Countercyclical Capital Buffer**

\$'mm	JPMCHL	JPMFIL
Total Risk Exposure Amount	241,615	734
Institution Specific Countercyclical Buffer Rate	0.190%	0.591%
Institution Specific Countercyclical Buffer Requirement	459	4

<sup>16</sup>Article 7(1) of Commission Implementing Regulation (EU) No 680/2014.

## 8. Credit Risk Adjustments (Article 442)

### Adoption of IFRS 9

Effective 1<sup>st</sup> January 2018, the Company adopted IFRS 9 'Financial Instruments', which superseded IAS 39 'Financial Instruments Recognition and Measurement'. The adoption of IFRS 9 resulted in changes to the classification and measurement of financial assets including the impairment of financial assets and the presentation of gains and losses related to certain financial liabilities designated at fair value through profit or loss.

### Impairment of financial assets and lending-related commitments

The Company recognises expected credit losses ('ECL') for financial assets that are measured at amortised cost or fair value through other comprehensive income ('FVOCI'), and specified off-balance sheet lending-related commitments such as loan commitments and financial guarantee contracts.

Provisions for ECL are recognised on initial recognition of the financial instrument based on expectations of 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 includes 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 determination of the stage 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 has conducted quantitative tests, which considers, but is not limited to, existing risk management indicators, credit rating changes and reasonable and supportable forward-looking information. Forward-looking information reflects a range of scenarios that incorporate macro-economic factors that are composed and monitored by the Firmwide specialised economic forecasting team.

The key input components for the quantification of expected credit 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 existing regulatory and capital frameworks where overlap is present for 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.

### 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.

### Past due

A financial asset is past due when a counterparty has failed to make a payment when contractually due following appropriate market convention.

### Credit Risk Adjustments for Derivatives

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.

The following analysis for credit exposures is only provided for material exposure classes or industries exceeding 5% of the total net value. All other exposure classes or industries are included under 'Other residual exposure'. Exposure class 'Exposure in default' is only shown as its original exposure class. JPMML's capital requirement for credit risk (including counterparty risk) is \$420k and therefore due to immateriality additional disclosures have not been made throughout section 8.

All tables in this section do not include counterparty credit risk.

## Net and Average Exposures

Net values of on-balance sheet and off-balance exposures are depicted in the tables below. The net value is gross carrying value of exposure less impairments or provisions. The firm has calculated average exposure based on the average of the four quarter end points during the year.

**Table 34: EU CRB-B - Total and average net amount of exposures for JPMCHL**

Exposure class (\$'mm)		JPMCHL	
		Net exposure at the end of the period	Average net exposure over the period
1	Central governments or central banks	30,382	27,818
2	Institutions	7,634	18,026
3	Corporates	26,993	32,484
4	Other Residual Exposure	2,034	2,939
5	<b>Total standardised approach</b>	<b>67,043</b>	<b>81,267</b>

**Table 35: EU CRB-B - Total and average net amount of exposures for JPMFIL**

Exposure class (\$'mm)		JPMFIL	
		Net exposure at the end of the period	Average net exposure over the period
1	Institutions	851	841
2	Corporates	63	41
3	Other Residual Exposure	59	52
4	<b>Total standardised approach</b>	<b>973</b>	<b>934</b>

## Exposure Class Analysis by Geographical Areas

The tables below provide a breakdown of net credit risk exposures (i.e. net values of on-balance sheet and off-balance sheet exposures before credit risk mitigation) by country. Other geographical areas includes multilateral development banks and international organisations which operate across multiple regions. The analysis is provided for countries exceeding 2.5% of the total net value.

**Table 36: EU CRB-C - Geographical breakdown of exposures for JPMCHL**

Exposure class (\$'mm)		Net Value											
		EMEA	Federal Republic of Germany	Luxembourg	France	Spain	Other Countries in EMEA (Residual Exposure)	AMERICA	United States of America	Other Countries in AMERICA (Residual Exposure)	APAC	Other Geographical Areas	Total
1	Central governments or central banks	30,337	29,755	—	45	9	528	43	30	13	2	—	30,382
2	Institutions	710	131	92	35	79	373	6,125	6,111	14	799	—	7,634
3	Corporates	17,181	349	3,894	1,903	1,650	9,385	9,482	8,383	1,099	330	—	26,993
4	Other Residual Exposure	579	—	34	—		545	1,421	1,301	120	—	34	2,034
5	Total standardised approach	48,807	30,235	4,020	1,983	1,738	10,831	17,071	15,825	1,246	1,131	34	67,043

**Table 37: EU CRB-C - Geographical breakdown of exposures for JPMFIL**

Exposure class (\$'mm)		Net Value					
		EMEA	United Kingdom	Other Countries in EMEA (Residual Exposure)	AMERICA	United States of America	Total
1	Institutions	206	206	—	645	645	851
2	Corporates	63	63	—	—	—	63
3	Others (Residual Exposure)	14	14	—	45	45	59
4	Total standardised approach	283	283	—	690	690	973

## Concentration Analysis of Credit Risk Exposures

As it is depicted in tables below the majority of credit risk exposures is concentrated in the finance industry.

**Table 38: EU CRB-D - Concentration of exposures by industry or counterparty types for JPMCHL**

Exposure class (\$'mm)		Finance Industry	Manufacturing	Other Residual Exposure	Total
1	Central governments or central banks	29,859	—	523	30,382
2	Institutions	7,368	—	265	7,634
3	Corporates	7,359	7,481	12,153	26,993
4	Other Residual Exposure	2,026	—	9	2,034
5	<b>Total standardised approach</b>	<b>46,612</b>	<b>7,481</b>	<b>12,950</b>	<b>67,043</b>

**Table 39: EU CRB-D - Concentration of exposures by industry or counterparty types for JPMFIL**

Exposure class (\$'mm)		Finance Industry	Total
1	Institutions	851	851
2	Corporates	63	63
3	Other Residual Exposure	59	59
4	<b>Total standardised approach</b>	<b>973</b>	<b>973</b>

## Residual Maturity Analysis of Credit Risk Exposures

The tables below show net values of on-balance sheet exposures without taking into account the effects of credit risk mitigation broken down by exposure class and residual maturity. Residual maturity is the remaining number of years before an obligation becomes due according to the existing terms of agreement.

**Table 40: EU CRB-E - Maturity of exposures for JPMCHL**

Exposure class (\$'mm)		Net exposures					Total
		On Demand	< = 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	
1	Central governments or central banks	109	29,734	—	—	539	30,382
2	Institutions	—	6,130	—	—	718	6,848
3	Corporates	16	2,427	2,176	173	927	5,719
4	Other Residual Exposure	—	149	274	—	1,393	1,816
5	<b>Total standardised approach</b>	<b>125</b>	<b>38,440</b>	<b>2,450</b>	<b>173</b>	<b>3,577</b>	<b>44,765</b>

**Table 41: EU CRB-E - Maturity of exposures for JPMFIL**

Exposure class (\$'mm)		Net exposure value					Total
		On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	
1	Institutions	—	19	—	—	832	851
2	Corporates	—	63	—	—	—	63
3	Other Residual Exposure	—	—	—	—	59	59
4	<b>Total standardised approach</b>	<b>—</b>	<b>82</b>	<b>—</b>	<b>—</b>	<b>891</b>	<b>973</b>



## Analysis of Credit Exposures

The tables below show defaulted and non-defaulted exposures before credit risk mitigation broken down by exposure class and associated credit risk adjustments. Credit risk adjustments arising from loan loss provisions which are individually immaterial are not used to reduce the exposure value. This is consistent with the CoRep submission.

**Table 42: EU CR1-A - Credit quality of exposures by exposure class and instrument for JPMCHL**

Exposure class (\$'mm)		a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges	Net Values
		Defaulted exposures	Non-defaulted exposures					
								(a+b-c-d)
1	Central governments or central banks	—	30,382	—	—	—	—	30,382
2	Institutions	—	7,634	—	—	—	—	7,634
3	Corporates	161	26,833	1	—	—	1	26,993
4	Other Residual Exposure	—	2,034	—	—	—	—	2,034
5	Total standardised approach	161	66,883	1	—	—	1	67,043
6	<b>Total</b>	<b>161</b>	<b>66,883</b>	<b>1</b>	<b>—</b>	<b>—</b>	<b>1</b>	<b>67,043</b>
7	Of which: Loans	161	6,589	1	—	—	1	6,749
8	Of which: Debt securities	—	22	—	—	—	—	22
9	Of which: Off-balance-sheet exposures	—	22,278	—	—	—	—	22,278

**Table 43: EU CR1-A - Credit quality of exposures by exposure class and instrument for JPMFIL**

Exposure class (\$'mm)		a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges	Net Values
		Defaulted exposures	Non-defaulted exposures					
								(a+b-c-d)
1	Institutions	—	851	—	—	—	—	851
2	Corporates	—	63	—	—	—	—	63
3	Other Residual Exposure	—	59	—	—	—	—	59
4	Total standardised approach	—	973	—	—	—	—	973
5	<b>Total</b>	<b>—</b>	<b>973</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>973</b>
6	Of which: Loans	—	63	—	—	—	—	63

## Industry Analysis of Credit Risk Exposures

The tables below present an analysis of credit quality of on-balance sheet and off-balance sheet exposures before credit risk mitigation by industry sector and associated credit risk adjustments.

**Table 44: EU CR1-B - Credit quality of exposures by industry or counterparty types for JPMCHL**

Industry sector (\$'mm)		a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges	Net Values
		Defaulted exposures	Non-defaulted exposures					(a+b-c-d)
1	Finance Industry	161	46,452	1	—	—	1	46,612
2	Manufacturing	—	7,481	—	—	—	—	7,481
3	Other Residual Exposure	—	12,950	—	—	—	—	12,950
4	<b>Total</b>	<b>161</b>	<b>66,883</b>	<b>1</b>	<b>—</b>	<b>—</b>	<b>1</b>	<b>67,043</b>

**Table 45: EU CR1-B - Credit quality of exposures by industry or counterparty types for JPMFIL**

Industry sector (\$'mm)		a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges	Net Values
		Defaulted exposures	Non-defaulted exposures					(a+b-c-d)
1	Finance Industry	—	973	—	—	—	—	973
2	<b>Total</b>	<b>—</b>	<b>973</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>973</b>

## Geographical Location of Exposures

The tables below show credit exposures before credit risk mitigation broken down by geographic location. Other geographical areas includes multilateral development banks and international organisations which operate across multiple regions. The analysis is provided for countries exceeding 2.5% of the total net value.

**Table 46: EU CR1-C - Credit quality of exposures by geography for JPMCHL**

Country (\$'mm)		a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges	Net Values
		Defaulted exposures	Non-defaulted exposures					
								(a+b-c-d)
1	<b>EMEA</b>	—	48,807	—	—	—	—	48,807
2	Federal Republic of Germany	—	30,235	—	—	—	—	30,235
3	Luxembourg	—	4,020	—	—	—	—	4,020
4	France	—	1,983	—	—	—	—	1,983
5	Spain	—	1,738	—	—	—	—	1,738
6	Other Countries in EMEA (Residual Exposure)	—	10,831	—	—	—	—	10,831
7	<b>AMERICA</b>	161	16,912	1	—	—	1	17,071
8	United States of America	—	15,825	—	—	—	—	15,825
9	Other Countries in AMERICA (Residual Exposure)	161	1,086	1	—	—	1	1,246
10	<b>APAC</b>	—	1,131	—	—	—	—	1,131
11	<b>Other Geographical Areas</b>	—	34	—	—	—	—	34
12	<b>Total</b>	161	66,883	1	—	—	1	67,043

**Table 47: EU CR1-C - Credit quality of exposures by geography for JPMFIL**

Country (\$'mm)		a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges	Net Values
		Defaulted exposures	Non-defaulted exposures					
								(a+b-c-d)
1	<b>EMEA</b>	—	283	—	—	—	—	283
2	United Kingdom	—	283	—	—	—	—	283
3	Other Countries in EMEA (Residual Exposure)	—	—	—	—	—	—	—
4	<b>AMERICA</b>	—	690	—	—	—	—	690
5	United States of America	—	690	—	—	—	—	690
6	<b>Total</b>	—	973	—	—	—	—	973

## Non-performing and Forborne Exposures

The following tables provide an overview of non-performing and forbore exposures in JPMCHL as per the Commission Implementing regulation (EU) No 680/2017. No exposure was forbore as at 31<sup>st</sup> December 2018. There was no forbore or non-performing exposure in JPMFIL and JPMML.

Table 48: EU CR1-E - Non-performing and forborne exposures for JPMCHL

[illegible]

## Credit Risk Adjustments

No credit risk adjustment was made in JPMFIL and JPMML in the reporting period. The specific credit risk adjustments of \$1m, made in JPMCHL, relate to loans to corporate customers.

**Table 49: EU CR2-A - Changes in the stock of general and specific credit risk adjustments**

		JPMCHL
		Accumulated specific credit risk adjustment (\$mm)
1	Opening balance 1 <sup>st</sup> January 2018	137
2	Increases due to amounts set aside for estimated loan losses during the period	1
3	Decreases due to amounts reversed for estimated loan losses during the period	(137)
9	Closing balance 31 <sup>st</sup> December 2018	1
10	Recoveries on credit risk adjustments recorded directly to the statement of profit or loss <sup>17</sup>	(116)
11	Specific credit risk adjustments directly recorded to the statement of profit or loss	1

## Defaulted and Impaired Exposures

The table below presents changes in defaulted or impaired loans and debt securities during 2018 in JPMCHL. The defaulted exposure of £161m represents loans made to corporate customers. No defaulted exposure has been reported in JPMFIL and JPMML.

**Table 50: EU CR2-B - Changes in the stock of defaulted and impaired loans and debt securities**

		JPMCHL
		Gross carrying value defaulted exposures (\$'mm)
1	Opening balance 1 <sup>st</sup> January 2018	339
2	Loans and debt securities that have defaulted or impaired since the last reporting period	161
5	Other changes <sup>18</sup>	(339)
6	Closing balance 31 <sup>st</sup> December 2018	161

## Past Due Exposures

As at 31<sup>st</sup> December 2018 there were no material past due exposures reported in the entities in scope.

<sup>17</sup> The negative balance represents a positive entry in the P&L and vice versa.

<sup>18</sup> Includes loans sold in the reporting period.

## 9. Unencumbered Assets (Article 443)

### Background

The below disclosures represents the computed median values of the four quarters between 31<sup>st</sup> December 2017 and 31<sup>st</sup> December 2018, in accordance with the EBA guidelines in Part Eight of CRD IV ((EU) regulation 2017/2295 supplementing regulation EU No 575/2013 on the disclosure of encumbered and unencumbered assets). Note the median is calculated individually across all cells hence rows in the tables above are not additive.

Assets are considered encumbered when they have been pledged or used to secure, collateralise or credit enhance a transaction which impacts their transferability and free use. Asset Encumbrance ('AE') refers to where a bank's assets are securing liabilities in the event that an institution fails to meet its financial obligations. In the event of insolvency unsecured creditors may be unable to benefit from the liquidation of encumbered assets as they are being pledged in other transactions.

### Disclosure on Asset Encumbrance

#### J.P. Morgan Capital Holdings Ltd.

Table 51: Encumbered and unencumbered assets for JPMCHL

\$'mm	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets
Assets of the reporting institution	111,637		548,912	
Equity instruments	24,881		14,195	
Debt securities	34,596	34,596	26,835	26,835
of which: covered bonds	1,276	1,276	854	854
of which: asset-backed securities	11	11	528	528
of which: issued by general governments	25,061	25,061	9,780	9,780
of which: issued by financial corporations	4,028	4,028	10,322	10,322
of which: issued by non-financial corporations	4,581	4,581	4,415	4,415
Other assets	63		464,109	

Table 52: Collateral received for JPMCHL

\$'mm	Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance
Collateral received by the reporting institution	396,575	108,804
Loans on demand	—	—
Equity instruments	82,052	11,997
Debt securities	313,171	97,330
of which: covered bonds	1,435	1,023
of which: asset-backed securities	4	893
of which: issued by general governments	286,397	64,666
of which: issued by financial corporations	14,004	24,711
of which: issued by non-financial corporations	10,905	6,139
Loans and advances other than loans on demand	—	—
Other collateral received	—	—
Own debt securities issued other than own covered bonds or ABSs	—	—
Own covered bonds and asset-backed securities issued and not yet pledged	—	—
Total assets, collateral received and own debt securities issued	508,213	

Table 53: Sources of encumbrance for JPMCHL

\$'mm	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
Carrying amount of selected financial liabilities	318,129	343,489

### Accompanying narrative information

JPMS plc is the primary subsidiary within JPMCHL and like all broker dealers, it naturally has a relatively high level of AE given its business model i.e. to finance long inventory, run matched books and pledge collateral in line with the contractual and regulatory

derivative requirements. The principal unsecured creditors of the entity are intercompany affiliates, not third-parties, principally JPMCB via its branch network. Further, JPMS plc holds a pool of highly liquid unencumbered assets for liquidity purposes, in addition to the business that can finance assets on an unsecured basis. JPMS plc forms an integral part firm's resolution framework and, via Solvent Wind Down, indicates that the entity can be wound down in an orderly manner generating sufficient cash to meet all obligations as they fall due, including its unsecured liabilities.

JPMS plc reports AE on a quarterly basis with assets and collateral defined to be encumbered or unencumbered as per the EBA guidelines and is based on the UK GAAP balance sheet.

### J.P. Morgan Financial Investments Ltd.

**Table 54: Encumbered and unencumbered assets for JPMFIL**

\$'mm	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets
Assets of the reporting institution	1		4,409	
Equity instruments	—		22	
Debt securities	—	—	—	—
of which: covered bonds	—	—	—	—
of which: asset-backed securities	—	—	—	—
of which: issued by general governments	—	—	—	—
of which: issued by financial corporations	—	—	—	—
of which: issued by non-financial corporations	—	—	—	—
Other assets	—		4,331	

**Table 55: Collateral received for JPMFIL**

\$'mm	Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance
Collateral received by the reporting institution	—	4,173
Loans on demand	—	—
Equity instruments	—	—
Debt securities	—	4,173
of which: covered bonds	—	—
of which: asset-backed securities	—	—
of which: issued by general governments	—	339
of which: issued by financial corporations	—	1,346
of which: issued by non-financial corporations	—	2,485
Loans and advances other than loans on demand	—	—
Other collateral received	—	—
Own debt securities issued other than own covered bonds or ABSs	—	—
Own covered bonds and asset-backed securities issued and not yet pledged	—	—
Total assets, collateral received and own debt securities issued	—	

**Table 56: Sources of encumbrance for JPMFIL**

\$'mm	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
Carrying amount of selected financial liabilities	—	1

### Accompanying narrative information

JPMFIL is almost wholly made up of JP Morgan Markets Ltd and there is very little asset encumbrance within this entity. On balance sheet, cash collateral given by the entity is encumbered, however the balance is immaterial (\$1m).

This level of encumbrance has been maintained and no further sources of encumbrance are expected going forward.

**J.P. Morgan Mansart Management Ltd.****Table 57: Encumbered and unencumbered assets for JPMML**

\$'mm	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets
Assets of the reporting institution	—		17	
Equity instruments	—		—	
Debt securities	—	—	—	—
of which: covered bonds	—	—	—	—
of which: asset-backed securities	—	—	—	—
of which: issued by general governments	—	—	—	—
of which: issued by financial corporations	—	—	—	—
of which: issued by non-financial corporations	—	—	—	—
Other assets	—		1	

**Accompanying narrative information**

This entity has neither collateral received nor encumbrance to report.



## 10. Use of External Credit Assessment Institutions (Article 444)

### ECAIs and Exposure Classes

Under the Standardised approach, RWA are calculated using credit ratings assigned by External Credit Assessment Institutions ('ECAI'). The firm applies the standard ECAI ratings to risk weight mappings provided by the EBA.

J. P. Morgan uses the following ECAIs to determine risk weights for this purpose:

- Moody's;
- Standard & Poor's ('S&P'); and
- Fitch.

These rating assessments are used for calculation of the risk weights for the following classes of exposure:

- Central governments and central banks;
- Institutions;
- Corporates;
- Securitisation positions;
- Multilateral development banks;
- Regional governments and local authorities; and
- Short-term claims on institutions and corporates.

All other exposure classes are assigned risk weightings described in the standardised approach as per the CRR (Article 113 to Article 134).

## Exposures at Default by Risk Weights

### Credit Risk Exposure at Default Pre-Credit Risk Mitigation

The following tables show exposures at default before credit risk mitigation broken down by credit exposure class and risk weights. The tables includes only credit risk exposures (excluding counterparty credit risk). Risk weights applied for EEA member states are applied under article 114 and hence bucketed under 0%. The Credit and Counterparty Risk requirement for JPMMML is only \$420k and therefore the supplementary disclosures below are not made.

Table 58: EU CR5 - Standardised approach (pre-CRM) for JPMCHL

Exposure class (\$'mm)		Risk weight								Total	Of which unrated
		0%	20%	50%	100%	150%	250%	1250%	Deducted		
1	Central governments or central banks	30,037	91	37	103	2	112	—	—	30,382	135
3	Public sector entities	—	1	—	1	—	—	—	—	2	1
4	Multilateral development banks	34	—	—	—	—	—	—	—	34	4
6	Institutions	—	6,536	610	436	—	—	51	—	7,633	568
7	Corporates	—	1,931	3,716	20,049	1,138	—	—	—	26,834	11,083
10	Exposures in default	—	—	—	160	—	—	—	—	160	160
11	Higher-risk categories	—	—	—	—	909	—	—	—	909	910
15	Equity	—	—	—	—	131	4	—	—	135	132
16	Other items	—	—	—	954	—	—	—	51	1,005	922
17	<b>Total</b>	30,071	8,559	4,363	21,703	2,180	116	51	51	67,094	13,915

Table 59: EU CR5 - Standardised approach (pre-CRM) for JPMFIL

Exposure class (\$'mm)		Risk weight			Total	Of which unrated
		20%	50%	100%		
6	Institutions	544	101	206	851	349
7	Corporates	—	—	63	63	63
15	Equity	—	—	14	14	14
16	Other items	—	—	45	45	45
17	<b>Total</b>	544	101	328	973	471

### Credit Risk Exposure at Default Post-Credit Risk Mitigation

The breakdown of credit risk exposures (excluding counterparty credit risk) post conversion factor and post risk mitigation technique (including volatility adjustments) under the standardised approach, by exposure class, is presented in the tables below.

**Table 60: EU CR5 - Standardised approach (post-CRM) for JPMCHL**

Exposure classes		Risk weight								Total	Of which unrated
		0%	20%	50%	100%	150%	250%	1250%	Deducted		
1	Central governments or central banks	30,037	91	37	103	2	112	—	—	30,382	135
3	Public sector entities	—	1	—	1	—	—	—	—	2	1
4	Multilateral development banks	34	—	—	—	—	—	—	—	34	4
6	Institutions	—	6,469	425	410	—	—	51	—	7,355	518
7	Corporates	—	1,209	1,985	12,871	1,005	—	—	—	17,070	7,609
10	Exposures in default	—	—	—	160	—	—	—	—	160	160
11	Higher-risk categories	—	—	—	—	740	—	—	—	740	740
15	Equity	—	—	—	—	131	4	—	—	135	132
16	Other items	—	—	—	954	—	—	—	51	1,005	922
17	<b>Total</b>	30,071	7,770	2,447	14,499	1,878	116	51	51	56,883	10,221

**Table 61: EU CR5 - Standardised approach (post-CRM) for JPMFIL**

Exposure classes		Risk weight			Total	Of which unrated
		20%	50%	100%		
6	Institutions	544	101	206	851	349
7	Corporates	—	—	63	63	63
15	Equity	—	—	14	14	14
16	Other items	—	—	45	45	45
17	<b>Total</b>	544	101	328	973	471

### Counterparty Credit Risk Exposures at Default Pre-Credit Risk Mitigation

The table below shows exposures at default before credit risk mitigation technique for counterparty credit risk broken down by exposure class and risk weight.

**Table 62: EU CCR3 - Standardised approach - CCR exposures by regulatory portfolio and risk (pre-CRM) for JPMCHL**

Exposure class (\$'mm)		Risk weight						Total	Of which unrated
		0%	2%	20%	50%	100%	150%		
1	Central government or central banks	13,001	—	1,290	13,796	6,079	—	34,166	6,045
2	Regional government or local authorities	168	—	177	—	—	—	345	—
3	Public sector entities	—	—	2,347	1	88	—	2,436	1,930
4	Multilateral development banks	849	—	—	166	—	—	1,015	199
5	International organisations	83	—	—	—	—	—	83	11
6	Institutions	48	68,829	58,595	19,153	1,114	14	147,753	78,083
7	Corporates	—	—	1,454	2,390	51,758	790	56,392	49,973
9	Higher-risk categories	—	—	112	—	—	23,403	23,515	23,515
12	<b>Total</b>	14,149	68,829	63,975	35,506	59,039	24,207	265,705	159,756

**Table 63: EU CCR3 - Standardised approach - CCR exposures by regulatory portfolio and risk (pre-CRM) for JPMFIL**

Exposure class (\$'mm)		Risk Weight				Total	Of which unrated
		0%	20%	50%	100%		
1	Central government or central banks	22	—	—	—	22	—
6	Institutions	—	5	466	—	471	1
7	Corporates	—	—	—	3	3	3
12	<b>Total</b>	22	5	466	3	496	4

### Counterparty Credit Risk Exposures at Default Post-Credit Risk Mitigation

The table below shows exposures at default post credit risk mitigation technique (including volatility adjustments) for counterparty credit risk broken down by exposure class and risk weight.

**Table 64: EU CCR3 - Standardised approach - CCR (post-CRM) exposures by regulatory portfolio and risk for JPMCHL**

Exposure class (\$'mm)		Risk weight						Total	Of which unrated
		0%	2%	20%	50%	100%	150%		
1	Central government or central banks	12,919	—	1,290	1	5,115	—	19,325	5,082
2	Regional government or local authorities	168	—	177	—	—	—	345	—
3	Public sector entities	—	—	1,738	1	7	—	1,746	1,361
4	Multilateral development banks	840	—	—	155	—	—	995	179
5	International organisations	77	—	—	—	—	—	77	6
6	Institutions	41	68,946	54,170	17,142	1,049	14	141,362	76,786
7	Corporates	—	—	1,418	2,057	44,098	655	48,228	42,394
9	Higher-risk categories	—	—	112	—	—	18,791	18,903	18,903
12	<b>Total</b>	14,045	68,946	58,905	19,356	50,269	19,460	230,981	144,711

**Table 65: EU CCR3 - Standardised approach - CCR (post-CRM) exposures by regulatory portfolio and risk for JPMFIL**

Exposure class (\$'mm)		Risk weight				Total	Of which unrated
		0%	20%	50%	100%		
1	Central government or central banks	22	—	—	—	22	—
6	Institutions	—	5	74	—	79	1
7	Corporates	—	—	—	2	2	2
12	<b>Total</b>	22	5	74	2	103	3

## 11. Exposure to Market Risk (Article 445)

JPMCHL's market risks arise predominantly from activities in the Firm's CIB business booked in JPMS plc. CIB makes markets in products across fixed income, foreign exchange, equities and commodities markets. JPMCHL's portfolio of covered positions under Basel III is predominantly held by the CIB. Some additional covered positions are held by the Firm's other LOBs. JPMML's market risk is driven by foreign exchange risk. There is no material market risk in JPMFIL.

**Table 66: EU MR1 - Market risk under the standardised approach**

\$'mm		JPMCHL		JPMML	
		RWA	Capital requirements	RWAs	Capital requirements
	Outright products				
1	Interest rate risk (general and specific)	33,224	2,658	—	—
2	Equity risk (general and specific)	24,931	1,994	—	—
3	Foreign exchange risk	8,441	675	1	—
4	Commodity risk	821	66	—	—
	Options				
5	Simplified approach	0	0	—	—
6	Delta-plus method	2,322	186	—	—
7	Scenario approach	5,390	431	—	—
8	Securitisation (specific risk)	4,127	330	—	—
9	<b>Total</b>	<b>79,256</b>	<b>6,340</b>	<b>1</b>	<b>—</b>

## 12. Operational Risk (Article 446)

### Pillar 1

All UK material regulated entities with the exception of JPMMML calculate the operational risk capital requirement for Pillar 1 using the Basic Indicator Approach ('BIA') as set out under Basel III. The BIA sets the required level of operational risk capital as 15% of the bank's annual positive gross income averaged over the previous three years.

The minimum capital requirement for JPMMML under the Fixed Overheads approach is calculated as the higher of the Fixed Overheads Requirement and the sum of market risk, credit risk and other Pillar 1 capital requirements.

**Table 67: Risk Weighted Assets for Operational Risk**

Calculation Method (\$'mm)	JPMCHL	JPMFIL	JPMMML
Basic Indicator Approach	16,579	194	
Fixed Overheads Requirement			13
<b>Total RWA</b>	<b>16,579</b>	<b>194</b>	<b>13</b>

### Pillar 2

In addition to the Pillar 1 assessment, the Firm uses an internal approach to calculate operational risk capital under Pillar 2. This internal approach leverages an operational risk scenario analysis framework for calculating each legal entities operational risk capital.

Operational risk scenarios focus on exceptional but plausible operational risk events which may or may not have previously impacted the legal entities. Such operational risk events result from inadequate or failed internal processes or systems, human factors, or due to external events. They include legal risk and regulatory fines and exclude business strategy and reputation risk. The scenario analysis process is an important tool for assessing the operational risk exposure, thereby providing a forward looking view to the Board and senior management of potential future losses based on the risk profile of the legal entities.

The Pillar 2 operational risk capital requirement for JPMCHL, JPMFIL and JPMMML is set using the two largest high severity operational risk loss scenarios

### 13. Non Trading Book Equity Investments (Article 447)

The non-trading book equity positions are primarily related to strategic investments in clearing houses and exchanges which are required to be held for membership to be able to access their services. Other non-trading book equity positions are related to investments in JP Morgan Chase undertakings.

#### Value of investments

The non-trading book equity investments are reflected on the balance sheet at fair value. The balance sheet value is also used for the purpose of calculating exposure values for regulatory capital reporting. Further details on investment valuations can be found in the corresponding annual accounts available on the Companies House website.

**Table 68: Balance Sheet Value of Investments**

Investment (\$'mm)	JPMCHL	JPMFIL
Investments held at fair value	135	14



## 14. Exposure to Interest Rate Risk on Positions Not Included in the Trading Book (Article 448)

### J.P. Morgan Capital Holdings Limited

In addition to the Firmwide interest rate risk ('IRR') measures, JPMCHL's IRR is monitored through the standard approach, in line with PRA guidance (as discussed in the PRA's consultation paper (Assessing capital adequacy under Pillar 2)). In particular, the instantaneous impact of a 200bps parallel shock in rates on the economic value of the non-trading books, as defined within the scope of the Interest Rate Management policy, is evaluated for each of the UK entities under JPMCHL. The evaluation of the impact of a 200bps shock on the economic value of JPMCHL's non-trading book vs. the legal entity's capital resources is assessed quarterly.

The following table shows the economic impact for a 200bp shift in rate for JPMCHL as at December 2018, calculated in USD.

**Table 69: IRRBB for JPMCHL**

Non Trading +200bp Economic Impact (\$'m)	Non Trading -200bp Economic Impact (\$'mm)
182	-125

### J.P. Morgan Financial Investments Limited

JPMML's limited banking book activity is generated by intercompany funding in mainly overnight funding of balances, though some longer dated FX swaps are used to convert long US\$ to EUR (risk neutral) to match daily funding needs. The interest rate risk on this activity is not material.

## 15. Exposure to Securitisation Positions (Article 449)

### Securitisation Activities

JPMS plc is the only entity within the JPMCHL group that engages in securitisation activity relating to trading book investor activity; the entity did not act as sponsor or originator during 2018. There is no activity in JPMFIL or JPMML.

The risks related to securitisation and resecuritisation positions are managed in accordance with the Firm's credit risk and market risk management policies.

### Due Diligence

Basel III and CRDIV require that a banking organization is able to demonstrate, to the satisfaction of its regulatory supervisor, a comprehensive understanding of the features of a securitisation exposure that would materially affect its performance. The banking organization's analysis must be commensurate with the complexity and the materiality of the exposure in relation to capital of the banking organization. On an ongoing basis (no less frequently than quarterly), the banking organization must evaluate, review, and update as appropriate the analysis required under section 41(c)(1) of the proposed rule for each securitisation exposure.

The Firm's procedures prior to acquisition of a securitisation exposure include an analysis of:

- Structural features of the securitisation that would materially impact the performance of the exposure;
- Relevant information regarding the performance of the underlying credit exposure(s);
- Relevant market data of the securitisation; and
- For resecuritisation exposures, performance information on the underlying securitisation exposures.

In addition to this pre-trade analysis, the firm maintains data related to ongoing performance of the securitisation and resecuritisation exposures. As updated data becomes available, but at least on a quarterly basis for each securitisation and resecuritisation position, the firm's data is updated to reflect this information. This updated performance data is taken into consideration as positions are monitored and evaluated on an ongoing basis.

If the Firm is unable to meet any of the aforementioned due diligence requirements on each securitisation and resecuritisation position, a 1250% risk weight is applied to that position.

Of the entities in scope of the CRR for JP Morgan, only JPMS plc is involved in securitisation activity. JPMS plc was involved as an arranger, underwriter and investor in Securitisation in 2018.

Within JPMS plc, the securitisation business is concentrated in market-making and underwriting in Asset Backed Securities, Residential Mortgage Backed Securities, Commercial Mortgage Backed Securities and Collateralised Loan Obligations.

### Risk Management and Mitigation

Each LOB that transacts in these positions and the Market Risk function work together to monitor the positions, position changes, and the composition of the total portfolio. This includes, but is not limited to, the review of daily positions against approved risk limits using risk measures such as market values, risk factor sensitivities and stress loss scenarios. Covered securitisation and resecuritisation positions are included in the Firm's Risk Management VaR and Regulatory VaR. These positions are included in the market risk and limit reports that are distributed on a daily basis to the trading desks, Risk Management and senior managers within the lines of business. In addition to the daily reporting, weekly senior management meetings are scheduled between Front Office and Market Risk where such items as, but not limited to, sizeable transactions or market events impacting risk exposures are discussed.

Various strategies are employed by the Firm to mitigate the risk from securitisation and resecuritisation positions. These include credit risk mitigation at both the transaction and portfolio levels, and include analysis of the underlying collateral, diversification of the positions, and hedging, among others.

The credit risk team works closely with the business during both the transaction structuring phase and post close (through ongoing monitoring) in order to assess and mitigate the credit risk of both securitisation and re-securitisation positions. Tools typically employed are (i) at the transaction level: analysis of the underlying collateral (data modelling, due diligence, asset audit), structure/documentation negotiation and interest rate/FX derivative hedging strategies; and (ii) at the portfolio level: portfolio limits, transaction diversification and other ongoing assessments.

JPMorgan Chase securitisation exposures are sensitive to interest rate levels and the overall credit environment. The Firm may hedge credit spread and interest rate risk, and currency risk associated with non-U.S. denominated assets, as needed, related to its securitisation and resecuritisation positions. JPMorgan Chase's policies allow various financial instruments to be employed to mitigate or hedge the risks of securitisation and resecuritisation positions. Examples of these instruments include U.S. Treasuries, interest rate swaps, FX forwards, and various credit derivatives.

The desk takes on different levels of risk depending on the market and the type of risk required to meet the business objectives, along with providing liquidity for our clients at appropriate market levels. The portfolio of risk is mixed between various asset classes, with the concentration of the portfolio as at 31<sup>st</sup> December 2018 predominantly being senior and mezzanine in the waterfall structure.

## Risk Weighting and use of ECAs

At the European level JPMS Plc calculates capital requirements for securitisations under the CRR. We utilise the standardised approach to calculate risk weighted exposure amounts under Article 251.

As required under the standardised approach used to calculate capital requirements for JPMS plc, the entity applies the following approach to the use of external ratings for the purpose of deriving risk weights:

- Where ratings are provided by three ECAs, the middle rating is used;
- Where ratings are provided by two ECAs, the lower rating is used; and
- Where only one rating is provided, this is used.

The Firm applies external ratings from Moody's, Fitch and Standard and Poors for deriving risk weights for all securitisation and resecuritisation positions.

## Accounting for Securitisation Positions

The Firm's accounting policies for JPMS plc, under FRS 101, include matters relating to the accounting for securitisations. The determination of whether or not transactions whereby assets are securitized in SPVs is dependent on whether or not the legal rights to the cash flows of the assets have been transferred to the entity, and whether the Firm has transferred substantially all of the assets' risks and rewards. This is in accordance with IAS 39 Financial Instruments: Classification and Measurement, which is the accounting standard that outlines the rules for derecognition of financial assets. This analysis assists in the determination of whether or not the transactions are accounted for as sales or financings. Accounting for synthetic securitisations is determined under the appropriate accounting guidance, such as the guidance for accounting for derivatives and other financial instruments under IAS 39 Financial Instruments: Classification and Measurement. The Firm will recognize arrangements whereby it will provide financial support for the entity depending on the legal form of the arrangement and the substance of the arrangement. Typically the Firm would look to the guidance under IAS 39 for these arrangements as they meet the definition of financial instruments. The Firm notes that where JPMS plc has involvement in securitisations, these interests are reflected in accordance with the guidance under IFRS 10 Consolidated Financial Statements, IFRS 12 Disclosures of Interests in Other Entities and/or IAS 39 Financial Instruments Classification and Measurement.

## Key Changes during the Period

There were no significant changes to the Firm's quantitative disclosures for securitisation exposures during the period. All movements reflect standard business-as-usual activity.

**Table 70: Outstanding Amount of Exposures Securitised by Seniority for JPMCHL**

Exposure Type (\$'mm)	Securitised Positions Held (as Investor)		
	Senior	Mezzanine	First Loss (Equity)
Residential Mortgages	626	112	58
Commercial Mortgages	165	10	15
Of which: Resecuritisations	—	—	—
Loans to Corporates or SMEs	32	159	47
Of which: Resecuritisations	—	—	—
Consumer Loans	130	—	—
Other Assets	16	—	10
Of which: Resecuritisations	—	—	—
<b>Total</b>	<b>969</b>	<b>281</b>	<b>130</b>

**Table 71: Aggregate Amount of Securitised Positions Retained or Purchased by Exposure Type for JPMCHL**

Type of Investment (\$'mm)	Retained	Purchased	Total
Residential Mortgages	—	796	796
Commercial Mortgages	—	190	190
Of which: Resecuritisations	—	—	—
Loans to Corporates or SMEs	—	238	238
Of which: Resecuritisations	—	—	—
Consumer Loans	—	130	130
Other Assets	—	26	26
Of which: Resecuritisations	—	—	—
<b>Total</b>	<b>—</b>	<b>1,380</b>	<b>1,380</b>

Table 72: Aggregate Amount of Securitised Positions Retained or Purchased by Risk Weight Band for JPMCHL

Risk Weight Band	IRB S&P Equivalent Rating	Standardised S&P Equivalent Rating	Retained (\$'mm)	Purchased (\$'mm)
<= 10%	AAA to A+ (Senior Only)	N/A	—	—
> 10% <= 20%	A to A- (Senior Only) / AAA to A+ (Base Case)	N/A	—	590
> 20% <= 50%	A to A- (Base Case)	AAA to AA-	—	366
> 50% <= 100%	BBB+ to BBB (Base Case)	A+ to A-	—	105
> 100% <= 650%	BBB- (Base Case) to BB (Base Case)	BBB+ to BB-	—	29
> 650% <= 1250%	BB- (Base Case)	N/A	—	290
Deducted	B+ & Below (Base Case)	N/A	—	—
<b>Total</b>			—	1,380

Table 73: Aggregate Amount of Securitised and Re-securitised Positions by CQS for JPMCHL

Securitisation / Resecuritisation (\$'mm)	CQS 1	CQS 2	CQS 3	CQS 4	Other	Total
Securitisations	590	366	105	29	290	1,380
Resecuritisations	—	—	—	—	—	—
<b>Total</b>	590	366	105	29	290	1,380

## 16. Remuneration (Article 450)

### Background

This section sets out the remuneration disclosures required under Article 450 of the Capital Requirements Regulation (the 'CRR')<sup>19</sup> in relation to the UK Entities in scope, and in respect of the remuneration period ('Performance Year') ending 31<sup>st</sup> December 2018.

The UK Entities in scope are part of the J.P. Morgan Chase & Co group of companies. In this section, the terms 'J.P. Morgan' or 'Firm' refers to the J.P. Morgan Chase & Co. group of companies and each of the entities in that group globally, unless otherwise specified.

This section sets out general principles. Details of specific remuneration programmes are set forth in the relevant plan terms and conditions as in force from time to time.

### Qualitative Disclosures

As part of the Firm, the UK Entities apply J.P. Morgan's global compensation philosophy and pay practices. The qualitative remuneration disclosures required under Paragraphs 1(a) - (f) of Article 450 CRR for all employees of the Firm's subsidiaries and branches located in EMEA, including staff of the UK Entities, are available in the most recent EMEA Remuneration Policy Disclosure at:

<http://investor.shareholder.com/jpmorganchase/basel.cfm>.

### Additional qualitative disclosures specific to the UK Entities

The UK Entities complied with the applicable remuneration requirements of the Capital Requirements Directive ('CRD IV')<sup>20</sup>, as implemented in the Prudential Regulation Authority Rulebook and Financial Conduct Authority Handbook (the 'Remuneration Rules'). The following additional disclosures should therefore be read in conjunction with the EMEA Remuneration Policy Disclosure:

- The Firm has established a UK Remuneration Committee ('UK RemCo') formed of non-executive directors, including from the Boards of relevant entities in the UK Entities.
- The UK RemCo reviews the remuneration policy applicable to the UK Entities (the 'Remuneration Policy') on an annual basis, recommends it to the relevant Boards for adoption, and oversees its implementation. The UK RemCo last reviewed the Remuneration Policy that applied for the 2018 Performance Year in June 2018 with no material changes and was satisfied with its implementation.
- The UK RemCo held three meetings in respect of the 2018 performance year.
- The UK Entities undertake an annual review of its staff against the qualitative and quantitative criteria set out in the European Banking Authority's relevant Regulatory Technical Standard<sup>21</sup> to identify those roles which could potentially have a material impact on the risk profile of the UK Entities ('CRD IV Identified Staff'). A description of the types of employees considered as material risk takers is set out in the EMEA Remuneration Policy Disclosure. This CRD IV Identified Staff group is reviewed on an ongoing basis and CRDIV Identified Staff are notified of their status and the impact on their remuneration structure.
- The UK Entities Risk and Compliance functions are involved in the review of the Remuneration Policy, including reviewing the approach to the designation of CRD IV Identified Staff. The Internal Audit function performs a central and independent review of the implementation of the Remuneration Policy on an annual basis, and relevant findings are reported to the UK RemCo.
- All relevant UK Entities have obtained the relevant shareholder approval in accordance with Article 94(1)g of CRD IV (as implemented by the Remuneration Rules) to pay their CRD IV Identified Staff a maximum ratio of fixed to variable compensation of 1:2. This approval was last received on 29<sup>th</sup> September 2014, and 100% of shareholders were represented and in favour.
- JPMIB is considered to be in 'proportionality level three' under the PRA and FCA's guidance on proportionality. JPMIB considers it appropriate to dis-apply the rules on retained shares, deferral, performance adjustment and, where appropriate, the specific ratio between fixed and variable components of total remuneration on the basis that the Firmwide compensation structure includes appropriate levels of deferral, payment in non-cash instruments, and malus and clawback provisions (as set out in the EMEA Remuneration Policy Disclosure) which it considers to be consistent with and promote effective risk management.
- JPMML also complies with the applicable remuneration requirements of the Alternative Investment Fund Manager Directive ('AIFMD') and the UCITS V Directive. Further details are available in JPMML's Remuneration Policy Statement, available at <https://jpmorganmansart.com>

<sup>19</sup> Regulation (EU) No. 575 / 2013

<sup>20</sup> Directive 2013/36/EU

<sup>21</sup> Commission Delegated Regulation (EU) No 604/2014

- The compensation structure that applied to relevant CRD IV Identified Staff was as follows:
  - At least 40% of IC is deferred, rising to a minimum of 60% where (i) IC is GBP 500,000 or more; or (ii) the individual is a Board member of one of the relevant UK Entities.
  - The deferral period is at least three years, with vesting generally in three equal tranches on or around the anniversaries of the grant date.
  - For the subset of Identified Staff designated as 'Risk Managers', the deferral period is at least five years, with vesting in five equal tranches on the anniversaries of the grant date. For Identified Staff who hold PRA-designated functions under the Senior Manager Regime, the regulatory required deferral is deferred for at least seven years, with vesting in five equal annual tranches from the third anniversary of the grant date.
  - At least 50% of IC (both deferred and non-deferred) is awarded as Retained Stock or Restricted Stock Units ('RSUs').
  - Retained Stock and relevant RSUs are subject to a twelve month, post-vesting retention period during which the underlying J.P. Morgan shares acquired may not be sold, pledged, assigned or transferred to a private brokerage account, with the exception of RSUs awarded to Risk Managers (excluding Senior Managers) for which the retention period is six months.
  - For awards in respect of the 2017 performance year onwards, individuals are not entitled to receive or accrue dividend-equivalent payments on relevant RSUs until vesting.
  - All IC is subject to malus and clawback provisions which reflects the requirements of the Remuneration Rules, in addition to the firmwide recovery provisions and the Firm's Bonus Recoupment Policy.

## Quantitative disclosures

The following aggregate quantitative disclosures relate to the UK CIB Group's employees, and therefore include relevant employees of both the UK Entities in scope and other relevant UK CIB entities.

In preparation of these disclosures, the Firm has taken into account its obligations to individuals under the applicable EU and local data protection law. In light of these considerations, the Firm has concluded that it is appropriate to aggregate the compensation information in some areas.

### All staff

Table 74: All staff

In USD thousands	Fixed Compensation	Variable Compensation	Total Compensation
All staff	2,221,656	1,106,580	3,328,235

### CRD IV Identified Staff

Table 75: Breakdown by Business Area

In USD thousands	Total Compensation 2018	Number of Identified Staff
Management Body <sup>22</sup>	87,188	26
Senior Management <sup>23</sup>	97,368	29
All other CRD IV Identified Staff:		
Corporate & Investment Bank	867,041	598
Wealth Management	35,504	30
Corporate functions <sup>24</sup>	53,477	52
Independent Control Functions <sup>25</sup>	28,247	36
<b>Total</b>	<b>1,168,825</b>	<b>771</b>

<sup>22</sup> Includes both Executives and Non-Executives.

<sup>23</sup> Includes the Firm's Senior Managers under the SMR, excluding those on the Management Body.

<sup>24</sup> Includes costs transferred from other entities.

<sup>25</sup> As per footnote 24.

Table 76: Breakdown of Total Compensation

In USD thousands	Fixed Compensation 2018 (Cash)	Variable Compensation in respect of 2018			
		Upfront Cash	Upfront Equity	Deferred Cash	Deferred Equity
Management Body	35,904	5,606	1,962	152	43,563
Senior Management	50,613	5,198	2,821	458	38,278
All other CRD IV Identified Staff:					
Corporate & Investment Bank	455,938	81,087	72,934	18,072	239,010
Wealth Management	11,986	15,030	—	—	8,487
Corporate functions	25,982	7,524	5,298	1,662	13,010
Independent Control Functions	14,536	3,921	3,445	704	5,641
<b>Total</b>	<b>594,960</b>	<b>118,367</b>	<b>86,460</b>	<b>21,049</b>	<b>347,989</b>

Table 77: Analysis of Deferred Compensation

In USD thousands	Outstanding as at 1 January 2018 <sup>26</sup>	Awarded during 2018	Paid out during 2018	Adjusted ex-post		Forfeited	Outstanding as at 31 December 2018	
				Explicit	Implicit <sup>27</sup>		Unvested	Vested
Share-based								
Management Body	179,780	38,126	(62,498)	—	(11,561)	—	119,217	24,630
Senior Management	209,091	47,498	(97,351)	—	(10,056)	—	131,736	17,444
All other CRD IV Identified Staff:								
Corporate & Investment Bank	822,751	235,338	(380,220)	—	(40,783)	(17,731)	601,636	17,719
Wealth Management	26,135	8,049	(11,289)	—	(1,915)	(60)	20,222	698
Corporate functions	45,234	11,329	(19,528)	—	(2,517)	(2,091)	28,088	4,338
Independent Control Functions	23,539	6,020	(11,299)	—	(1,095)	(296)	16,700	170
Total	1,306,531	346,359	(582,158)	—	(67,927)	(20,178)	917,600	64,999
Cash-based								
Management Body	911	126	(455)	—	8	—	590	—
Senior Management	1,371	498	(677)	—	15	—	1,207	—
All other CRD IV Identified Staff:								
Corporate & Investment Bank	33,334	15,161	(11,934)	—	441	(322)	36,679	—
Wealth Management	409	—	(190)	—	3	—	222	—
Corporate functions	2,944	1,388	(908)	—	25	(597)	2,852	—
Independent Control Functions	1,446	856	(604)	—	20	(7)	1,711	—
Total	40,414	18,029	(14,767)	—	512	(926)	43,262	—

Table 78: Guarantees, Sign-ons and Severance Payments

In USD thousands	Guarantees and Sign-on		Severance		
	Number of Identified Staff	Made during the year	Number of Identified Staff	Made during the year	Highest award to a single person
Management Body	—	—	—	—	—
Senior Management	—	—	2	579	366
All other CRD IV Identified Staff	6	2,986	20	5,264	366

<sup>26</sup> All outstanding deferred awards are subject to malus and clawback provisions as set out in the most recent EMEA Remuneration Policy Disclosure

<sup>27</sup> The value of RSUs fluctuates with the value of the Firm's stock; the value of Deferred Cash awards fluctuates with the applicable interest rate.

**Table 79: Total Compensation Banding for CRD IV Identified Staff Earning at least EUR 1 Million**

2018 Total Compensation Bands	Number of Identified Staff
€1,000,001 to €1,500,000	162
€1,500,001 to €2,000,000	68
€2,000,001 to €2,500,000	40
€2,500,001 to €3,000,000	20
€3,000,001 to €3,500,000	19
€3,500,001 to €4,000,000	14
€4,000,001 to €4,500,000	6
€4,500,001 to €5,000,000	4
Over €5,000,001	13



## 17. Leverage (Article 451)

### Managing Leverage Risk

Leverage risk is monitored through the same processes and frameworks as capital adequacy and stress-testing. In addition, the new regulatory MREL are calibrated against both a capital-based and leverage-based measure. Leverage is assessed both on a point in time and through stress testing which is particularly important, as it is forward-looking and if the Firm's leverage ratios remain sustainable under stressed conditions, the risk of forced de-leveraging will be low.

The capital adequacy framework is based around a regular cycle of point-in-time capital calculations and reporting, supplemented by forward-looking projections and stress-testing, with corrective action taken as and when required to maintain an appropriate level of capitalisation. Each part of the process is subject to rigorous control.

Periodically, the entities in scope completes the ICAAP, which provides management with a view of the impact of severe and unexpected events on earnings, risk-weighted assets, capital resource and leverage. The Firm's ICAAP integrates stress-testing protocols with capital planning. More detail on the ICAAP is included in Section 5.

The information represented in the tables below constitutes the key applicable data elements for leverage identified in Title VII of the EBA Guidelines.

### Leverage Ratio Commentary

- **JPMCHL:** The leverage ratio has decreased by 0.64% from 7.57% as at 31<sup>st</sup> December 2017 to 6.93%. The decrease in the leverage ratio is driven by an increase in leverage exposure value due to increased business activity of Fixed Income Financing. This is partially offset by an increase in Tier 1 capital due to recognized audited profits.
- **JPMFIL:** The leverage ratio stands at 94.05% as at 31<sup>st</sup> December 2018, with no significant changes.

**Table 80: Summary Reconciliation of Accounting Assets and Leverage Ratio Exposures**

LR Sum (\$'mm)		JPMCHL	JPMFIL
		Applicable Amount	
1	Total assets as per published financial statements	669,580	5,508
4	Adjustments for derivative financial instruments	(60,597)	11
5	Adjustment for securities financing transactions (SFTs)	52,317	(46)
6	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	12,893	—
7	Other adjustments	(1,321)	(6)
8	Leverage ratio total exposure measure	672,872	5,467

**Table 81: Split of On-Balance Sheet Exposures**

LR Spl (\$'mm)		JPMCHL	JPMFIL
		CRR leverage ratio exposures	
EU-1	Total on-balance sheet exposures (exc. Derivatives, SFTs and exempted exposures), of which:	224,523	1,009
EU-2	Trading book exposures	178,220	36
EU-3	Banking book exposures, of which:	46,302	973
EU-5	Exposures treated as sovereigns	30,528	—
EU-6	Exposures to regional governments, MDB, international organisations and PSEs not treated as sovereigns	2	—
EU-7	Institutions	7,685	851
EU-8	Secured by mortgages of immovable properties	—	—
EU-10	Corporate	6,059	63
EU-11	Exposures in default	160	—
EU-12	Other exposures (e.g. equity, securitisations and other non-credit obligation assets)	1,868	59

Table 82: Leverage Ratio Common Disclosure

LR Com (\$'mm)		JPMCHL	JPMFIL
		CRR leverage ratio exposures	
On-balance sheet exposures (excluding derivatives and SFTs)			
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	224,523	1,009
2	(Asset amounts deducted in determining Tier 1 capital)	(1,321)	(6)
3	Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)	223,202	1,003
Derivative exposures			
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	42,850	19
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	193,586	11
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(43,233)	—
8	(Exempted CCP leg of client-cleared trade exposures)	(13,314)	—
9	Adjusted effective notional amount of written credit derivatives	605,068	—
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(605,068)	—
11	Total derivative exposures (sum of lines 4 to 10)	179,889	30
SFT exposures			
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	479,326	4,434
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(274,755)	—
14	Counterparty credit risk exposure for SFT assets	52,317	—
16	Total securities financing transaction exposures (sum of lines 12 to 15a)	256,888	4,434
Other off-balance sheet exposures			
17	Off-balance sheet exposures at gross notional amount	22,605	—
18	(Adjustments for conversion to credit equivalent amounts)	(9,712)	—
19	Other off-balance sheet exposures (sum of lines 17 and 18)	12,893	—
Capital and total exposure measure			
20	Tier 1 capital	46,645	5,141
21	Leverage ratio total exposure measure (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)	672,872	5,467
Leverage ratio			
22	Leverage ratio	6.93%	94.05%
Choice on transitional arrangements and amount of derecognised fiduciary items			
EU-23	Choice on transitional arrangements for the definition of the capital measure	Fully phased in	Fully phased in

## 18. Use of Credit Risk Mitigation Techniques (Article 453)

As part of its management of credit and counterparty credit exposures, the Firm actively engages in credit risk mitigation techniques to reduce the amount of credit risk it is taking, to spread the concentration of risk across its portfolio and ultimately to ensure efficient use of capital in compliance with the applicable regulations. This is accomplished through a number of means, including loan sales, receipt of collateral, master netting agreements, guarantees and credit derivatives and other risk-reduction techniques.

As a result of such credit risk mitigation activities the firm is potentially exposed to residual risk to the extent that said techniques prove less effective than expected. In this regard, the firm has established policies and procedures to ensure that this risk is adequately governed and the mitigating technique conservatively measured, as detailed below.

Receipt of collateral and netting arrangements: Where possible, the Firm seeks to mitigate its credit risk exposures arising from derivative transactions through the use of legally enforceable master netting arrangements and collateral agreements.

The Firm also seeks to mitigate its credit risk exposures through the use of legally enforceable master netting arrangements. These master agreements allow for netting of credit risk exposure to a counterparty resulting from transactions against the Group's obligations to the counterparty in the event of default, to produce lower net credit exposure. Similarly to CCF, Netting Confidence Factor ('NCF') is assigned to each jurisdiction/institution type where the Firm has obtained a legal opinion on the enforceability of the master trading agreement to close-out all governed transactions on a net basis in the event of a default (i.e. at a single legal claim). If the NCF is lower than 100%, no netting benefit is given.

Guarantees: The Third-Party Credit Supports policy sets out specific criteria for guarantees to be eligible for capital reduction, and to the extent they are not eligible the exposure retains its full value for the purposes of capital calculation. To ensure the legal enforceability of the commitment by the guarantor, all guarantees must be reviewed by legal counsel at the outset and are also subject to periodic review to ensure their ongoing effectiveness.

Credit Derivatives: The Firm uses credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure in the Firm's wholesale businesses. The effectiveness of credit default swaps ('CDS') as a hedge against the Firm's exposures may vary depending on a number of factors, including the named reference entity (i.e., the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS); the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm); and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures). However, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in maturity are actively monitored and managed by the Firm.

## Collateral Valuation and Management

The Firm's policies for collateral valuation and management are representative of industry standards and best practices. The fair value of the collateral is monitored daily. Full market value is not given to marketable assets accepted as collateral (apart from cash) in recognition of the fact that collateral is subject to price volatility and liquidity. A standard valuation reduction percentage (haircut) is applied to each asset class to mitigate the potential price decline of the collateral thereby covering volatility during the cure period. In addition, a Collateral Confidence Factor ('CCF') is assigned to each jurisdiction where the Firm has obtained a legal opinion on collateral enforceability. Any changes to CCFs require approval by Legal department. If the CCF is lower than 95% then, although J. P. Morgan would strictly have legal rights to collateral, conservatively no benefit is given to collateral in the exposure calculation for the purposes of capital requirements.

The Firm has internal policies in place relating to the type of acceptable collateral. These policies apply to the business which is booked in applicable UK legal entities. Cash and high quality bonds are generally considered acceptable collateral.

## Main Types of Collateral

As at 31<sup>st</sup> December 2018, circa 62% of the collateral which JPMS plc held was in cash and 38% in securities of which 16% in government bonds from G6 countries. If restricting the collateral assets to posting from external counterparties to JPMS plc, circa 74% was in cash and 26% in securities of which 19% in government bonds from G6 countries.

## Credit Risk Mitigation Effect for Credit Risk Exposures

The following tables illustrate the effect of credit risk mitigation techniques applied for credit risk exposures (i.e. on-balance sheet and off-balance sheet exposures) including RWA density as a synthetic metric on the riskiness of each exposure class portfolio.

Table 83: EU CR4 - Standardised approach - Credit risk exposure and CRM effects for JPMCHL

Exposure classes (\$'mm)		Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density	
		On-balance-sheet amount	Off-balance-sheet amount	On-balance-sheet amount	Off-balance-sheet amount	RWAs	RWA density
1	Central governments or central banks	30,382	—	30,382	—	423	1.39%
3	Public sector entities	2	—	2	—	1	61.07%
4	Multilateral development banks	34	—	34	—	—	0.31%
6	Institutions	6,848	785	6,848	507	2,556	34.76%
7	Corporates	5,560	21,274	5,332	11,738	15,614	91.47%
10	Exposures in default	160	—	160	—	160	100.00%
11	Higher-risk categories	690	219	690	50	1,110	150.00%
15	Equity	135	—	135	—	205	152.61%
16	Other items	954	—	954	—	954	99.96%
17	<b>Total</b>	<b>44,765</b>	<b>22,278</b>	<b>44,537</b>	<b>12,295</b>	<b>21,023</b>	<b>36.99%</b>

Table 84: EU CR4 - Standardised approach - Credit risk exposure and CRM effects for JPMFIL

Exposure classes (\$'mm)		Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density	
		On-balance-sheet amount	Off-balance-sheet amount	On-balance-sheet amount	Off-balance-sheet amount	RWAs	RWA density
6	Institutions	851	—	851	—	365	42.95%
7	Corporates	63	—	63	—	63	100.00%
15	Equity	14	—	14	—	14	100.00%
16	Other items	45	—	45	—	45	100.00%
17	<b>Total</b>	<b>973</b>	<b>—</b>	<b>973</b>	<b>—</b>	<b>487</b>	<b>50.09%</b>

## Credit Risk Mitigation Techniques

To reduce capital requirements exposures can be secured by collateral, financial guarantees or credit derivatives. JPMCHL and JPMFIL secure their exposure only by collateral as it is shown in the tables below.

Table 85: CRM techniques - Overview by exposure class for JPMCHL

Exposure class (\$'mm)		Exposures unsecured – Carrying amount	Exposures secured – Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Central governments or central banks	49,707	14,854	14,854	—	—
2	Regional government or local authorities	345	—	—	—	—
3	Public sector entities	1,748	691	691	—	—
4	Multilateral development banks	1,028	20	20	—	—
5	International organisations	77	6	6	—	—
6	Institutions	148,996	6,685	6,685	—	—
7	Corporates	74,224	9,025	9,025	—	—
10	Exposures in default	160	—	—	—	—
11	Higher-risk categories	19,813	4,652	4,652	—	—
15	Equity	135	—	—	—	—
16	Other items	954	—	—	—	—
17	<b>Total</b>	<b>297,187</b>	<b>35,933</b>	<b>35,933</b>	<b>—</b>	<b>—</b>

Table 86: CRM techniques - Overview by exposure class for JPMFIL

Exposure class (\$'mm)		Exposures unsecured – Carrying amount	Exposures secured – Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Central governments or central banks	22	—	—	—	—
6	Institutions	930	398	398	—	—
7	Corporates	65	1	1	—	—
15	Equity	14	—	—	—	—
16	Other items	45	—	—	—	—
17	<b>Total</b>	1,076	399	399	—	—

Table 87: EU CR3 - CRM techniques - Overview for JPMCHL

\$'mm		Exposures unsecured - Carrying amount	Exposures secured - Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Total loans	6,638	112	112	—	—
2	Total debt securities	22	—	—	—	—
3	<b>Total exposures</b>	6,658	112	112	—	—
4	Of which defaulted	160	—	—	—	—

Table 88: EU CR3 - CRM techniques - Overview for JPMFIL

\$'mm		Exposures unsecured - Carrying amount	Exposures secured - Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Total loans	63	—	—	—	—
3	<b>Total exposures</b>	63	—	—	—	—

## Exposures Covered by Credit Derivatives and Guarantees

JPMS PLC has a significant volume of credit derivatives in its trading portfolio. These are held for trading intent and are treated under the market risk framework rather than as credit risk mitigation.

## Balance Sheet Netting

The Firms' financial statements are prepared under FRS 101 with the exception of JPMCHL consolidated financial statements which are prepared under FRS 102. FRS 101 applies the recognition and measurement requirements of International Financial Reporting Standards ('IFRS') as adopted by the European Union, with reduced disclosures. Under IFRS financial assets and financial liabilities are offset and the net amount reported in the balance sheet when the requirements of IAS 32 'Financial Instruments: Presentation' are met; (i) there is currently a legally enforceable right to offset the recognised amounts and (ii) 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 firm or the counterparty. The same offsetting criterion is applied under FRS 102.

## Credit Risk Netting

In most jurisdictions in which the Firms operate, credit risk exposures can be reduced by applying netting. The Firms' normal practice is to enter into standard master agreements with counterparties (e.g. International Swaps and Derivatives Association, Global Master Repurchase Agreement, Global Master Stock Lending Agreement). These master agreements allow for netting of credit risk exposure to a counterparty resulting from transactions against the Group's obligations to the counterparty in the event of default, to produce lower net credit exposure. These agreements may also reduce settlement exposure (e.g. for foreign exchange transactions) by allowing for payments on the same day in the same currency to be set-off against one another. The firms apply the requirements as set out in the CRR with regards to application of netting from a regulatory capital perspective.

## 19. Use of Internal Market Risk Model (Article 455)

### Own Funds Requirements for Market Risk under the IMA

The standardised approach (Section 11) and Internal market risk models are employed to compute own funds requirements for market risk in JPMCHL. For qualitative information please refer to Section 2.

The capital charge under IMA represents approximately 14.3% of total market risk capital charge. The table below summarises the components of the own funds requirements under the IMA for market risk.

**Table 89: EU MR2-A - Market risk under the IMA**

\$'mm		JPMCHL	
		RWA	Capital requirements
1	VaR (higher of values a and b)	2,463	197
(a)	Previous day's VaR (Article 365(1) of the CRR (VaRt-1))		118
(b)	Average of the daily VaR (Article 365(1)) of the CRR on each of the preceding 60 business days (VaRavg) x multiplication factor (mc) in accordance with Article 366 of the CRR		197
2	SVaR (higher of values a and b)	8,078	646
(a)	Latest SVaR (Article 365(2) of the CRR (SVaRt-1))		399
(b)	Average of the SVaR (Article 365(2) of the CRR) during the preceding 60 business days (SVaRavg) x multiplication factor (ms) (Article 366 of the CRR)		646
3	IRC (higher of values a and b)	2,703	217
(a)	Most recent IRC value (incremental default and migration risks calculated in accordance with Article 370 and Article 371 of the CRR)		179
(b)	Average of the IRC number over the preceding 12 weeks		216
6	<b>Total</b>	<b>13,244</b>	<b>1,060</b>

As it is displayed in the table below, own funds requirements increased by \$515m to \$1,060m mainly driven by the expansion of IMA scope to include additional business lines. There were no material methodology or policy changes to the calculations

**Table 90: EU MR2-B - RWA flow statements of market risk exposures under the IMA**

\$'mm		VaR	SVaR	IRC	Total RWAs	Total capital requirements
1	<b>RWAs at 1<sup>st</sup> January 2018</b>	1,141	2,810	2,859	6,811	545
2	Movement in risk levels	251	(3,514)	(156)	(3,419)	(273)
3	Model updates/changes	1,071	8,782	—	9,853	788
4	Methodology and policy	—	—	—	—	—
8	<b>RWAs at 31<sup>st</sup> December 2018</b>	<b>2,463</b>	<b>8,078</b>	<b>2,703</b>	<b>13,245</b>	<b>1,060</b>

### Other Quantitative Information for Market Risk under the IMA

The following table displays the capital requirement values (maximum, minimum, average and the ending for the reporting period) resulting from different types of models approved by the PRA to be used for computing the regulatory capital charge at group level. The table captures data from 1<sup>st</sup> January 2018 till 31<sup>st</sup> December 2018.

**Table 91: EU MR3 - IMA values for trading portfolios**

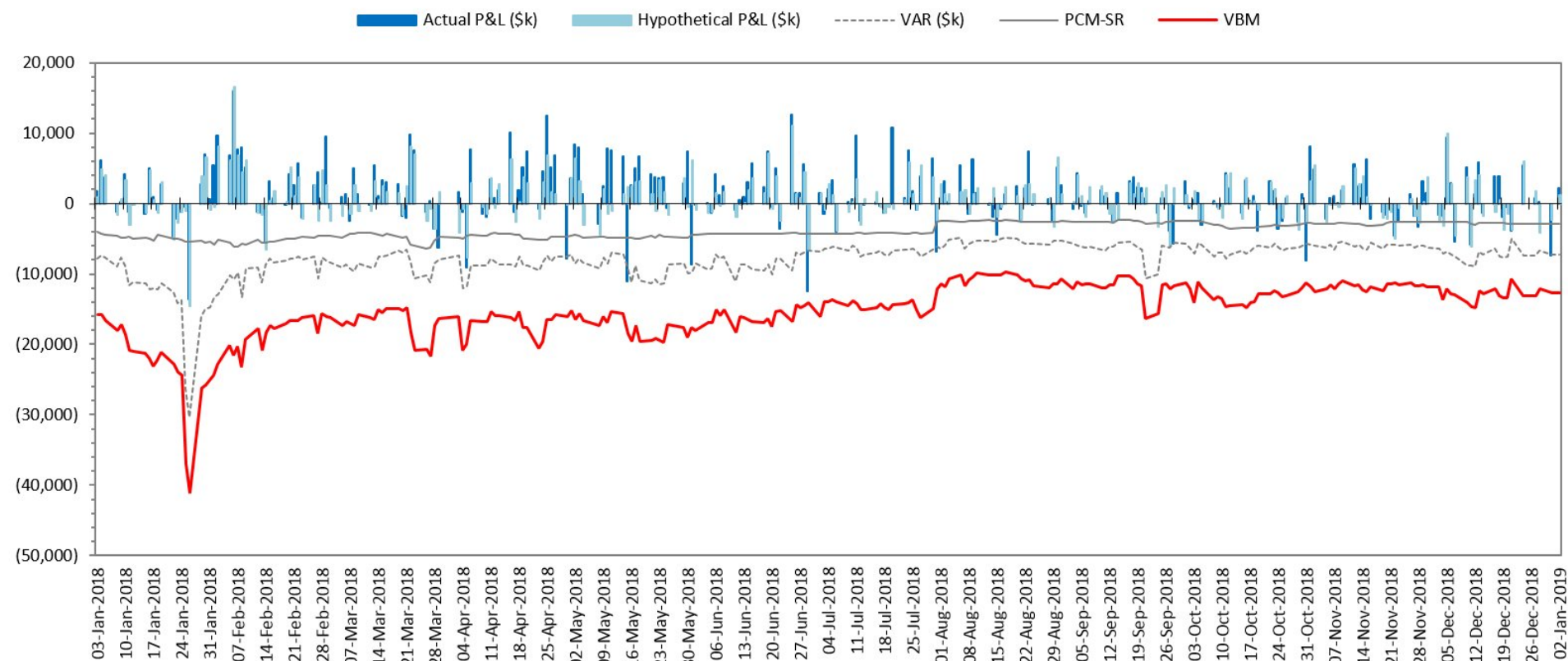
		JPMCHL (\$'mm)
<b>VaR (10 day 99%)</b>		
1	Maximum value	142
2	Average value	102
3	Minimum value	59
4	Period end	118
<b>SVaR (10 day 99%)</b>		
5	Maximum value	641
6	Average value	444
7	Minimum value	377
8	Period end	399
<b>IRC (99.9%)</b>		
9	Maximum value	332
10	Average value	209
11	Minimum value	121
12	Period end	179

## VBM Back-Testing

The Firm evaluates the effectiveness of its VBM<sup>28</sup> methodology by back-testing, which compares daily market risk-related gains and losses with daily VBM results for a one-day holding period and a 99% confidence level as prescribed by capital rules. Market risk related gains and losses are defined as profits and losses on trading book positions, captured through Hypothetical P&L and Actual P&L<sup>29</sup>.

VBM 'back-testing exceptions' occur when market risk related losses are greater than the estimate predicted by the VBM for the corresponding day. The following chart presents the VBM back-testing results for JPMS plc trading book positions covered by current IMA permission. In 2018 there were no top level back-testing exceptions.

Table 92: Comparison of VaR estimates with gains/losses



<sup>28</sup> J.P. Morgan uses 'VaR- based measure' ('VBM'), which should be treated as VaR for IMA regulatory capital purposes (as defined in the CRR).

<sup>29</sup> **Hypothetical P&L** (which is defined in JPM internal terminology as 'Clean P&L') is defined as market risk-related gains and losses on in-scope products and legal entities, excluding fees, brokerage commissions, fair value adjustments, net interest income, carry and gains and loss arising from day one positions.

**Actual P&L** consists of 'Hypothetical P&L', as defined above, plus carry, gains and losses from day one positions and certain reserves. P&L is updated with reserves including but not limited to fair value adjustments, model limitation and price testing at month-end.



## 20. Liquidity risk (Article 435(1))

Liquidity Risk is the risk that the Firm will be unable to meet its contractual and contingent financial obligations as they arise or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets and liabilities.

### Liquidity Management

Treasury and CIO is responsible for liquidity management. The primary objectives of effective liquidity management are to:

- Ensure that the Firm's core businesses and material legal entities are able to operate in support of client needs and meet contractual and contingent financial obligations through normal economic cycles as well as during stress events, and
- Manage an optimal funding mix and availability of liquidity sources.

As part of the Firm's overall liquidity management strategy, the Firm manages liquidity and funding using a centralised, global approach in order to:

- Optimize liquidity sources and uses;
- Monitor exposures;
- Identify constraints on the transfer of liquidity between the Firm's legal entities; and
- Maintain the appropriate amount of surplus liquidity at a firmwide and legal entity level, where relevant.

In the context of the Firm's liquidity management, Treasury and CIO is responsible for:

- Analysing and understanding the liquidity characteristics of the assets and liabilities of the Firm, lines of business and legal entities, taking into account legal, regulatory, and operational restrictions;
- Developing internal liquidity stress testing assumptions;
- Defining and monitoring firmwide and legal entity specific liquidity strategies, policies, reporting and contingency funding plans;
- Managing liquidity within the Firm's approved liquidity risk appetite tolerances and limits;
- Managing compliance with regulatory requirements related to funding and liquidity risk; and
- Setting transfer pricing in accordance with underlying liquidity characteristics of balance sheet assets and liabilities as well as certain off-balance sheet items.

### Liquidity Risk Oversight

The Firm has a liquidity risk oversight function whose primary objective is to provide assessment, measurement, monitoring, and control of liquidity risk across the Firm. Liquidity risk oversight is managed through a dedicated firmwide Liquidity Risk Oversight group. The Chief Investment Office, Treasury, and Corporate ('CTC') Chief Risk Officer ('CRO'), who reports to the Firm's CRO, is responsible for firmwide Liquidity Risk Oversight. Liquidity Risk Oversight's responsibilities include:

- Establishing and monitoring limits and indicators, including liquidity risk appetite tolerances;
- Monitoring and reporting internal firmwide and legal entity liquidity stress tests as well as regulatory defined liquidity stress tests;
- Approving or escalating for review new or updated liquidity stress assumptions;
- Monitoring liquidity positions, balance sheet variances and funding activities;
- Conducting ad hoc analysis to identify potential emerging liquidity risks; and
- Performing independent review of liquidity risk management processes

Treasury and the independent LRO function have established and implemented strategies, policies and procedures to effectively manage liquidity risk, which include the Liquidity Risk Oversight Policy, the CFP and the Liquidity Risk Limits and Indicators Policy. These policies and frameworks apply on a firmwide basis, and are supplemented by legal entity approaches where appropriate. Policies and procedures are in place for the review of all liquidity stress testing practices, methodologies, and assumptions through the firmwide Liquidity Stress Governance Forum; this includes application of legal entity specific assumptions where required.

JPMCHL subsidiaries' boards are ultimately responsible for the liquidity and funding risk within each entity and for establishing an appropriate liquidity risk appetite that reflects the nature and complexity of the business undertaken in the entity.

### Risk Governance and Measurement

Committees responsible for liquidity governance include the firmwide Asset Liability Committee ('ALCO'), as well as line of business and regional ALCOs, the Treasurer Committee, and the CTC Risk Committee, and JPMCHL subsidiaries' DRPC and EMEA Risk Committee.



## Internal stress testing

Liquidity stress tests are intended to ensure that the Firm has sufficient liquidity under a variety of adverse scenarios, including scenarios analysed as part of the firm's resolution and recovery planning. Stress scenarios are produced for JPMorgan Chase & Co. and the Firm's material legal entities on a regular basis, and ad hoc stress tests are performed, as needed, in response to specific market events or concerns.

Liquidity stress tests assume all of the Firm's contractual financial obligations are met and take into consideration varying levels of access to unsecured and secured funding markets, estimated non-contractual and contingent cash outflows and potential impediments to the availability and transferability of liquidity between jurisdictions and material legal entities such as regulatory, legal or other restrictions.

Liquidity outflow assumptions are modelled across a range of time horizons and currency dimensions and contemplate both market and idiosyncratic stresses. Results of stress tests are considered in the formulation of the Firm's funding plan and assessment of its liquidity position. JPMorgan Chase & Co. acts as a source of funding for the Firm through equity and long-term debt issuances, and its wholly owned direct subsidiary JPMorgan Chase Holdings LLC ('Intermediate Holding Company') provides funding support to the ongoing operations of the Parent Company and its subsidiaries, as necessary. The Firm maintains liquidity at the Parent Company and the Intermediate Holding Company, in addition to liquidity held at the operating subsidiaries, at levels sufficient to comply with liquidity risk tolerances and minimum liquidity requirements, and to manage through periods of stress where access to normal funding sources is disrupted.

## Contingency funding plan

The Firm's contingency funding plan ('CFP'), which is approved by the firmwide ALCO and the DRPC, is a compilation of procedures and action plans for managing liquidity through stress events. The CFP incorporates the limits and indicators set by the Liquidity Risk Oversight group. These limits and indicators are reviewed regularly to identify the emerging risks or vulnerabilities in the Firm's liquidity position. The CFP identifies the alternative contingent funding and liquidity resources available to the Firm and its legal entities in a period of stress.

## Internal Liquidity Adequacy Assessment Process

Annually, JPMCHL completes the Internal Liquidity Adequacy Assessment Process ('ILAAP'), which provides management with an assessment of the adequacy of JPMCHL and its subsidiaries' liquidity resources to cover liabilities as they fall due in a range of stressed conditions. Stress scenarios cover both market and idiosyncratic events. The ILAAP details how JPMCHL measures, manages and monitors its liquidity and funding risks against prescribed key liquidity risk drivers, the governance model employed and a forward looking liquidity and funding forecast consistent with the entity's business plan. If changes in the entity's or its subsidiaries' business, strategy, activities or operational environment suggest that the current level of liquid resources or the funding profile is no longer adequate, then the document will be updated more frequently. The ILAAP is reviewed by management and approved by the JPMCHL Board.

## Liquidity Risk Reporting and Measurement System

JPMCHL uses the firm's strategic liquidity risk technology platform (Liquidity Risk Infrastructure - 'LRI') to report and measure its liquidity risk position. LRI is the single global source for data consumption and reporting capabilities of the firm's liquidity reporting (both internal and external) and analytics as well as line of business, legal entity, currency and specific jurisdictional requirements and is also used to execute stress testing and associated limits and indicators.

## Liquidity Coverage Ratio ('LCR')

The Liquidity Coverage Ratio<sup>30</sup> as per the Commission Delegated Regulation (EU) 2015/61 requires credit institutions to maintain an amount of unencumbered high quality liquid assets that is sufficient to meet their estimated total net cash outflows over a prospective 30 calendar-day period of significant stress. From 1<sup>st</sup> January 2018 the LCR is required to be minimum of 100%.

The LCR disclosure in this document has been assessed in accordance with the European Banking Authority (EBA) guidelines on LCR disclosure (EBA/GL/2017/01) applying the necessary considerations set out in the EBA guidelines on materiality, proprietary and confidentiality and on disclosure frequency (EBA/GL/2014/14) and consistent with the EBA guidelines on disclosure requirements (EBA/GL/2016/11).

<sup>30</sup> In line with the EBA guidelines the average ratio disclosed in Table 93 is calculated as an average over the 12 data points used for each item, and therefore the quoted ratio is not equal to the average 'Liquidity buffer' divided by average 'Total net cash outflows'.

Table 93: LCR disclosure template for JPMCHL

Scope of consolidation: JPMCHL		Total unweighted value (average)				Total weighted value (average)			
Currency and units: (\$'mm)									
Quarter ending on:		31-Dec-18	30-Sep-18	30-Jun-18	31-Mar-18	31-Dec-18	30-Sep-18	30-Jun-18	31-Mar-18
Number of data points used in the calculation of averages		12	12	12	12	12	12	12	12
HIGH-QUALITY LIQUID ASSETS									
1	Total high-quality liquid assets (HQLA)					61,352	63,315	67,367	72,401
CASH-OUTFLOWS									
2	Retail deposits and deposits from small business customers, of which:	6,728	7,567	7,667	7,932	957	1,078	1,071	1,108
3	Stable deposits	113	148	171	187	6	7	9	9
4	Less stable deposits	6,615	7,418	7,495	7,745	951	1,071	1,062	1,098
5	Unsecured wholesale funding	25,643	25,940	25,122	23,534	18,834	18,322	17,345	15,554
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	6,332	7,138	7,523	7,647	1,583	1,785	1,881	1,912
7	Non-operational deposits (all counterparties)	19,312	18,801	17,599	15,887	17,251	16,537	15,464	13,642
9	Secured wholesale funding					45,082	43,431	42,506	40,639
10	Additional requirements	40,843	42,774	42,910	42,307	19,761	21,823	23,517	24,640
11	Outflows related to derivative exposures and other collateral requirements	20,621	22,531	23,607	23,504	16,475	18,418	19,925	20,912
12	Outflows related to loss of funding on debt products	423	484	515	543	423	484	515	543
13	Credit and liquidity facilities	19,800	19,759	18,788	18,260	2,864	2,921	3,076	3,184
14	Other contractual funding obligations	53,434	54,344	64,848	74,977	1,390	5,005	17,066	29,461
15	Other contingent funding obligations	8,223	8,952	9,372	10,584	1,611	1,617	1,485	1,332
16	TOTAL CASH OUTFLOWS					87,634	91,276	102,989	112,733
CASH-INFLOWS									
17	Secured lending (eg reverse repos)	297,186	286,182	278,733	268,504	68,313	62,374	56,408	49,288
18	Inflows from fully performing exposures	7,180	8,173	8,294	8,077	4,405	5,081	5,137	4,960
19	Other cash inflows	7,417	11,098	22,850	35,367	5,551	8,870	20,616	33,094
20	TOTAL CASH INFLOWS	311,783	305,452	309,878	311,948	78,270	76,326	82,160	87,342
EU-20c	Inflows Subject to 75% Cap	260,522	255,925	262,551	268,102	78,270	76,326	82,160	87,342
						Total adjusted value			
21	LIQUIDITY BUFFER					61,352	63,315	67,367	72,401
22	TOTAL NET CASH OUTFLOWS					22,731	24,244	27,172	29,608
23	LIQUIDITY COVERAGE RATIO (%)					275%	266%	255%	250%

The adjusted value of the liquidity buffer is the value of the total high quality liquid assets after the application of both haircuts and any applicable cap. The adjusted value of net cash outflows is calculated after the cap on inflows is applied where applicable.

The liquidity buffer disclosed covers both Pillar I and Pillar II liquidity risks.

## Concentration of Funding and Liquidity Sources

JPMCHL's stock of HQLA primarily consists of unencumbered cash and certain high quality liquid securities as defined in the LCR rule. JPMCHL funds its balance sheet through diverse sources of funding including operational and non-operational deposits and secured and unsecured funding in the capital markets. The primary source of the long-term unsecured funding liabilities is from other affiliates.

## Derivative Exposures and Potential Collateral Calls

In the normal course of business, JPMCHL uses derivative instruments predominantly for market-making activities and to manage its own credit and other market risk exposure. The LCR cash flows related to derivative contracts primarily reflect potential calls from counterparties to post additional collateral in the form of variation margin or initial margin due to potential valuation changes or downgrades of Company's external credit ratings. In addition, the LCR derivative cash flows reflect counterparties' contractual right to substitute higher quality collateral with lower quality collateral, as well as requiring the return of initial margin to clients.

## Currency Mismatch in the LCR

JPMCHL ensures that the currency composition of its liquidity buffer is broadly matched with that of its net outflows for potential short term stress periods by monitoring the EBA LCR for each significant currency as early warning indicators.

## Other

JPMML and JPMFIL are not subject to Commission Delegated Regulation (EU) 2015/61. Consequently, they are not subject to the LCR disclosure guidelines set out in EBA/GL/2017/01.

## 21. Bank Recovery and Resolution Directive

Article 26 of the Bank Recovery and Resolution Directive ('BRRD') states that member States shall ensure that group entities make public whether or not they have entered into a group financial support agreement pursuant to Article 19 of the BRRD and make public a description of the general terms of any such agreement and the names of the group entities that are party to it and update that information at least annually. Articles 431 to 434 of Regulation (EU) No 575/2013 shall apply.

Pursuant to the disclosure requirements under the PRA's Group Financial Support Instrument 2015, the BRRD undertakings on which the disclosure obligation is imposed have not entered into any group financial support agreement.

Pursuant to the disclosure requirements under the FCA handbook section IFPRU 11.5, no firm or qualifying parent undertaking on which the disclosure obligation is imposed has entered into any group financial support agreement.

## 22. Disclosures Not Applicable to the UK Entities

The following Articles of CRR are not applicable as at 31<sup>st</sup> December 2018:

- Indicators of global systemic importance (Art. 441);
- Use of the IRB Approach to credit risk (Art. 452); and
- Use of the Advanced Measurement Approaches to operational risk (Art. 454).

## 23. Glossary of Acronyms

ALCO	Asset and Liability Committee	ILAAP	Internal Liquidity Adequacy Assessment Process
APAC	Asia Pacific	IRM	Independent Risk Management
AVG	Average exposure	IRR	Interest Rate Risk
AT	Additional Tier	IRRBB	Interest Rate Risk in the Banking Book
BIA	Basic Indicator Approach	ITS	Implementing Technical Standards
BoE	Bank of England	JPMAME	JPMorgan Asset Management (Europe) Sarl
BRRD	Bank Recovery and Resolution Directive	JPMBL	J.P. Morgan Bank Luxembourg SA
CCAR	Comprehensive Capital Analysis and Review	JPMC	J.P. Morgan Chase and Company
CCR	Counterparty Credit Risk	JPMCHL	J.P. Morgan Capital Holdings Limited
CCF	Credit Conversion Factor	JPMEL	J.P. Morgan Europe Limited
CCP	Central Counterparty Clearing House	JPMFIL	J.P. Morgan Financial Investments Limited
CDS	Credit Default Swap	JPMIB	J.P. Morgan International Bank Limited
CEO	Chief Executive officer	JPML	J.P. Morgan Limited
CET	Common Equity Tier	JPMML	J.P. Morgan Markets Limited
CFP	Contingency Funding Plan	JPMML	J.P. Morgan Mansart Management Limited
CIB	Corporate and Investment Bank	JPMS PLC	J.P. Morgan Securities PLC
CIO	Chief Investment Office	LCR	Liquidity Coverage Ratio
CQS	Credit Quality Step	LE	Legal Entities
CRD	Capital Requirements Directive	LERMs	Legal Entity Risk Managers
CRI	Credit Risk Infrastructure System	LDA	Loss Distribution Approach
CRM	Credit Risk Mitigation	LGD	Loss given default
CRO	Chief Risk Officer	LOB	Line of Business
CRR	Capital Requirements Regulation	LRO	Liquidity Risk Oversight
CTC	CIO, Treasury and Corporate	MREL	Minimum Requirement for own funds and Eligible Liabilities
CTC RC	The CIO, Treasury and Other Corporate Risk Committee	MRO	Market Risk Officer
CVA	Credit Valuation Adjustment	NBIA	New Business Initiative Approval
DRE	Derivative Risk Equivalent	NCF	Netting Confidence Factor
DRPC	Directors' Risk Policy Committee	ORG	Operational Risk Governance
EaR	Earnings at Risk	ORM	Operational Risk Management
EBA	European Banking Authority	ORMF	Operational Risk Management Framework
ECAI	External Credit Assessment Institutions	OTC	Over the Counter
ECM	Exposure Control Module	PD	Probability of Default
EMC	EMEA Management Committee	PFCE	Potential Future Credit Exposure
EMEA	Europe, Middle East and Africa	PRA	Prudential Regulation Authority
ERC	EMEA Risk Committee	RWA	Risk Weighted Assets
EVS	Economic Value Sensitivity	S&P	Standard & Poor's
FCA	Financial Conduct Authority	SFT	Securities Financing Transactions
FCC	Firmwide Control Committee	SMF	Senior Management Functions
FCCM	Financial Collateral Comprehensive Method	SNPR	Single Name Position Risk
FFCOI	Firmwide Fiduciary and Conflicts of Interest Committee	TAG	Transaction Approval Group
FFRGC	Firmwide Fiduciary Risk Governance Committee	TLAC	Total Loss Absorbing Capacity
FRC	Firmwide Risk Committee	VaR	Value-at-Risk
FRE	Firmwide Risk Executive	UK RemCo	UK Remuneration Committee
FRS	Financial Reporting Standard		
FSB	Financial Stability Board		
FSI	Firmwide Stress Infrastructure		
GFC	Global Funds Control		
G-SII	Globally Systemically Important Institution		
IAS	International Accounting Standards		
ICAAP	Internal Capital Adequacy Assessment Process		
IFM	Intraday Facility Monitor		
IFRS	International Financial Reporting Standards		