

JPMORGAN CHASE & Co.
LIQUIDITY COVERAGE RATIO DISCLOSURE

For the quarterly period ended December 31, 2018

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LIQUIDITY COVERAGE RATIO

Liquidity coverage ratio

The U.S. Liquidity Coverage Ratio rule (the “LCR rule”) requires JPMorgan Chase & Co. (“the Firm”) to maintain an amount of unencumbered high quality liquid assets (“HQLA”) that is sufficient to meet its estimated total net cash outflows over a prospective 30 calendar-day period of significant stress. The LCR is required to be a minimum of 100%. Under the LCR rule, the amounts of HQLA held by JPMorgan Chase Bank N.A. and Chase Bank USA, N.A. that are in excess of each entity’s standalone 100% minimum LCR requirement, and that are not transferable to non-bank affiliates, must be excluded from the Firm’s reported HQLA.

The following table summarizes the Firm’s average LCR for the three months ended December 31, 2018 based on the Firm’s current interpretation of the finalized LCR framework.

Average weighted amount ^(a) (in millions)	Three months ended December 31, 2018
HQLA ^(b)	\$ 529,270
Net cash outflows	467,704
LCR	113%
Excess HQLA ^(b)	\$ 61,566

(a) Represents the average weighted amount after applying regulatory prescribed (1) HQLA haircuts; and (2) cash outflow and inflow rates, respectively.

(b) Excludes average excess HQLA held at JPMorgan Chase Bank N.A. and Chase Bank USA, N.A. that are not transferable to non-bank affiliates.

The Firm’s average LCR was driven by:

- HQLA, which primarily consists of cash on deposit at central banks and eligible Level 1 securities, and,
- Net cash outflows predominantly related to the Firm’s deposits, lending-related commitments and, to a lesser extent, derivatives, and unsecured debt.

The Firm’s average LCR was 113%, 115% and 119% for the three months ended December 31, 2018, September 30, 2018 and December 31, 2017.

The Firm’s average LCR decreased during the three months ended December 31, 2018, compared with the three month period ended September 30, 2018 due to a decrease in the average amount of reportable HQLA. Although HQLA increased in JPMorgan Chase Bank, N.A. during the period, there was a decrease in the amount of HQLA in JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. that was determined to be transferable to non-bank affiliates. This decrease was based on a change in the Firm’s interpretation of amounts available for transfer.

The Firm’s average LCR decreased for the three months ended December 31, 2018, compared with the prior year period, due to a reduction in average HQLA primarily driven by (a) long-term debt maturities and CIB activities, and (b) a decrease in the amount of HQLA in JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. that was determined to be transferable to non-bank affiliates based on a change in the Firm’s interpretation of amounts available for transfer.

The Firm’s average LCR may fluctuate from period to period, due to changes in its HQLA and estimated net cash outflows under the LCR as a result of ongoing business activity. The Firm’s HQLA are expected to be available to meet its liquidity needs in a time of stress.

The following table presents further detail on the Firm's average LCR, and average unweighted and weighted amount of HQLA, cash outflows and cash inflows, for the three months ended December 31, 2018.

Three months ended December 31, 2018 (in millions)		Average Unweighted Amount ^(a)	Average Weighted Amount ^(b)
HIGH-QUALITY LIQUID ASSETS			
1	Total eligible high-quality liquid assets (HQLA), of which: ^(c)	\$ 536,370	\$ 529,270
2	Eligible level 1 liquid assets	491,526	491,526
3	Eligible level 2A liquid assets	43,778	37,211
4	Eligible level 2B liquid assets	1,066	533
CASH OUTFLOW AMOUNTS			
5	Deposit outflow from retail customers and counterparties, of which:	\$ 720,363	\$ 43,208
6	Stable retail deposit outflow	449,424	13,483
7	Other retail funding outflow	241,994	25,164
8	Brokered deposit outflow	28,945	4,561
9	Unsecured wholesale funding outflow, of which:	722,904	267,456
10	Operational deposit outflow	501,982	125,222
11	Non-operational funding outflow	215,859	137,171
12	Unsecured debt outflow	5,063	5,063
13	Secured wholesale funding and asset exchange outflow ^(d)	667,530	170,834
14	Additional outflow requirements, of which:	441,848	130,420
15	Outflow related to derivative exposures and other collateral requirements	45,100	30,217
16	Outflow related to credit and liquidity facilities including unconsolidated structured transactions and mortgage commitments	396,748	100,203
17	Other contractual funding obligation outflow	4,214	4,214
18	Other contingent funding obligations outflow^(e)	296,408	10,476
19	TOTAL CASH OUTFLOW	\$ 2,853,267	\$ 626,608
CASH INFLOW AMOUNTS			
20	Secured lending and asset exchange cash inflow^(d)	\$ 716,092	\$ 164,967
21	Retail cash inflow	24,939	12,470
22	Unsecured wholesale cash inflow^(f)	23,276	18,404
23	Other cash inflows, of which:	16,846	16,646
24	Net derivative cash inflow	3,276	3,276
25	Securities cash inflow	6,125	6,125
26	Broker-dealer segregated account inflow	7,245	7,245
27	Other cash inflow	200	—
28	TOTAL CASH INFLOW	\$ 781,153	\$ 212,487
29	HQLA AMOUNT^(c)		Average Weighted Amount^(b) \$ 529,270
30	TOTAL NET CASH OUTFLOW AMOUNT EXCLUDING THE MATURITY MISMATCH ADD-ON		\$ 414,121
31	MATURITY MISMATCH ADD-ON		53,583
32	TOTAL NET CASH OUTFLOW AMOUNT		\$ 467,704
33	LIQUIDITY COVERAGE RATIO (%)		113%

(a) Represents the average notional amount of (1) eligible HQLA before applying regulatory-prescribed haircuts; and (2) balances subject to outflows and inflows over a prospective 30-day period before applying regulatory-prescribed outflow and inflow rates.

(b) Represents the average weighted amount after applying regulatory prescribed (1) HQLA haircuts; and (2) cash outflow and inflow rates, respectively.

(c) Excludes excess HQLA at JPMorgan Chase Bank N.A. and Chase Bank USA, N.A that are not transferable to non-bank affiliates.

(d) Outflows on line 13 predominantly relate to securities loaned or sold under repurchase agreements and collateralized deposits; these amounts are largely offset by inflows reported on line 20 from securities borrowed or purchased under resale agreements and margin loans. These amounts include outflows and inflows associated with certain prime brokerage activities.

(e) Predominantly reflects repurchases of debt securities issued by the Firm that mature more than 30 calendar days after the calculation date.

(f) Predominantly reflects repayments of wholesale loans.

High quality liquid assets

As mentioned above, HQLA is the amount of liquid assets that qualify for inclusion in the LCR. HQLA primarily consist of unencumbered cash and certain high quality liquid securities as defined in the LCR rule.

For the three months ended December 31, 2018, the Firm's average HQLA was \$529.3 billion compared with average HQLA of \$535.0 billion for the three months ended September 30, 2018. This amount excludes the amount of HQLA at JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A in excess of each entity's standalone 100% minimum LCR requirements that is not transferable to non-bank affiliates within the Firm.

The following table presents the Firm's average HQLA included in the LCR broken out by HQLA-eligible cash and securities for the three months ended December 31, 2018.

Average weighted amount (in millions)	Three months ended December 31, 2018
HQLA	
Eligible cash ^(a)	\$ 297,069
Eligible level 1 securities ^{(b)(c)}	194,457
Total eligible Level 1 assets	491,526
Eligible level 2a securities ^{(c)(d)}	37,211
Eligible level 2b securities ^(c)	533
Total HQLA	\$ 529,270

(a) Represents cash on deposit at central banks, primarily Federal Reserve Banks.

(b) Predominantly U.S. Treasuries, U.S government-guaranteed agency mortgage-backed securities ("MBS"), and sovereign bonds.

(c) HQLA eligible securities may be reported in securities borrowed or purchased under resale agreements, trading assets, or investment securities on the Firm's Consolidated balance sheets.

(d) Primarily U.S. government-sponsored enterprise agency MBS net of applicable haircuts under the LCR rules. Excludes excess level 2a securities held by JPMorgan Chase Bank, N.A.

Other liquidity sources

As of December 31, 2018, in addition to assets reported in the Firm's HQLA under the LCR rule, the Firm had approximately \$226 billion of unencumbered marketable securities, such as equity securities and fixed income debt securities, available to raise liquidity, if required. This includes HQLA-eligible securities included as part of the excess liquidity at JPMorgan Chase Bank, N.A. that are not transferable to non-bank affiliates.

As of December 31, 2018, the Firm also had approximately \$276 billion of available borrowing capacity at various FHLBs, discount windows at the Federal Reserve Banks and various other central banks as a result of collateral pledged by the Firm to such banks. This borrowing capacity excludes the benefit of securities reported in the Firm's HQLA or other unencumbered securities that are currently pledged at the Federal Reserve Bank discount windows. Although available, the Firm does not view the borrowing capacity at Federal Reserve Bank discount windows and the various other central banks as a primary source of liquidity. For additional information, see Liquidity Risk Management on pages 95-100 of the 2018 Form 10-K.

Net cash outflows

The Firm's estimated net cash outflows over the aforementioned 30-day period of stress are based on standardized stress outflow and inflow rates prescribed in the LCR rule, which are applied to the balances of the Firm's assets, sources of funds, and obligations. The net cash outflows included in the LCR may differ from the liquidity impacts the Firm may experience in an actual time of stress, due to uncertainty in the nature, severity, and duration of the stress event.

The following table summarizes a select range of outflow and inflow rates defined in the LCR rule:

Category	Average Unweighted Amount	Outflow/Inflow rate			
		Minimum		Maximum	
Deposits from retail customers and counterparties	Notional balance (excludes deposits not subject to early withdrawal with maturities >30 days)	3%	Fully insured	40%	Partially insured, third-party placed, including brokered and non-brokered
Unsecured wholesale funding					
Deposits	Notional balance (excludes contractual maturities >30 days and those not subject to early withdrawal)	5%	Fully insured, non-financial and financial, operational	100%	Financial, non-operational, hedge funds and private equity funds
Non-deposit funding, including debt	Notional balance with contractual maturities ≤30 days			100%	Long-term debt, commercial paper, other borrowed funds, customer brokerage payables, federal funds purchased
Secured wholesale funding/lending transactions					
	Notional balance with contractual maturities ≤30 days	0%	Secured by Level 1 liquid assets; secured lending where the collateral has been rehypothecated and the transaction is assumed to mature beyond 30 days	100%	Funding transactions secured by non-HQLA assets; excluding the transactions below that are subject to lower outflow rates: (1) sovereigns, multilateral development banks and U.S. government-sponsored enterprises subject to a 20% risk weight, and, (2) customer short positions covered by other customers' collateral
				100%	Lending transactions secured by assets, not included in the Firm's HQLA and available for immediate return or secured by non-HQLA, excluding non-HQLA secured margin loans that are subject to lower inflow rates
Derivatives					
Contractual	Notional balance of cash and collateral associated with transactions maturing ≤30 days			100%	Net cash outflow/inflow
Contingent	Notional balance of collateral securing derivative transactions	20%	Potential valuation change in collateral pledged that is not a level 1 liquid asset	100%	Collateral outflow resulting from a change in the Firm's financial condition or due to a change in the valuation of derivative transactions; excess client collateral
Commitments	Notional balance that can be drawn in ≤30 days	0%	Affiliated depository institutions also subject to LCR rule	100%	Financial sector institutions or subsidiaries thereof
Other contingent funding obligations (primarily Firm-issued debt securities)	Notional balance with contractual maturities >30 days	3%	Unstructured debt	5%	Structured debt
Retail and wholesale cash inflow (primarily loans)	Notional balance with contractual maturities ≤30 days	50%	Retail/SME ^(a) loans with contractual maturities ≤30 days	100%	Financial sector loans and non-operational deposit placements

(a) SME - small and medium enterprises

Sources of funds

The Firm funds its global balance sheet through diverse sources of funding including a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio is funded with a portion of the Firm's deposits, through securitizations and, with respect to a portion of the Firm's real estate-related loans, with secured borrowings from the FHLBs. Deposits in excess of the amount utilized to fund loans are primarily invested by Treasury and Chief Investment Office ("CIO") in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity risk characteristics

Securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments are primarily funded by the Firm's securities loaned or sold under agreements to repurchase, trading liabilities-debt and equity instruments, and a portion of the Firm's long-term debt and stockholders' equity. In addition to funding securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments, proceeds from the Firm's debt and equity issuances are used to fund certain loans and other financial and non-financial assets, or may be invested in the Firm's investment securities portfolio.

Prescribed outflow rates are applied to these funding amounts to calculate an average weighted amount of cash outflows included in the Firm's LCR.

Deposits

A key strength of the Firm is its diversified deposit franchise, through each of its lines of business, which provides a stable source of funding and limits reliance on the wholesale funding markets. A significant portion of the Firm's deposits are consumer and wholesale operating deposits, which are both considered to be stable sources of liquidity. Wholesale operating deposits are considered to be stable sources of liquidity because they are generated from customers that maintain operating service relationships with the Firm. For the three months ended December 31, 2018, the Firm had total average unweighted retail deposits of \$720.4 billion and average weighted cash outflows of \$43.2 billion, which resulted in an implied LCR cash outflow rate of 6%, and a 94% liquidity value. Additionally, for the three months ended December 31, 2018, the Firm had total average unweighted operating deposit balances of \$502.0 billion and average weighted cash outflows of \$125.2 billion, which resulted in an implied LCR cash outflow rate of 25%, and a 75% liquidity value.

The table below summarizes the average deposit cash outflows for purposes of the LCR for the three months ended, December 31, 2018.

Deposit Outflows ^(a) Three months ended December 31, 2018 (in millions)	Average Unweighted Amount	Average Weighted Amount	Cash Outflow Percentage
Deposit outflow from retail customers and counterparties, of which:	\$ 720,363	\$ 43,208	6%
Stable retail deposit outflow	449,424	13,483	3%
Other retail funding outflow ^(b)	241,994	25,164	10%
Brokered deposit outflow	28,945	4,561	16%
Operational deposit outflow	501,982	125,222	25%
Non-operational funding outflow^{(b)(c)}	215,859	137,171	64%
Total	\$ 1,438,204	\$ 305,601	21%

(a) Excludes approximately \$58.4 billion of average unweighted collateralized deposits, margin cash, and non-retail/SME time deposits with contractual maturities greater than 30 days per the LCR rule.

(b) Includes approximately \$30.4 billion of average unweighted non-deposit funding, primarily retail and wholesale customer brokerage payables, and other unsecured wholesale funding (which are included in accounts payable and other liabilities, and federal funds purchased and securities loaned or sold under repurchase agreements on the Firm's Consolidated balance sheets).

(c) Largely relates to cash in client operational accounts that is estimated to be in excess of the amount needed to support operational services provided to those clients.

Short-term funding

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. These instruments are secured predominantly by high-quality securities collateral, including government-issued debt and agency MBS, and constitute a significant portion of the federal funds purchased and securities loaned or sold under repurchase agreements on the Consolidated balance sheets.

The Firm's sources of short-term unsecured funding primarily consist of issuance of wholesale commercial paper.

Long-term funding and issuance

Long-term funding provides additional sources of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven primarily by expected client activity, liquidity considerations, and regulatory requirements, including total loss absorbing capacity ("TLAC"). Long-term funding objectives include maintaining diversification, maximizing market access and optimizing funding costs. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.

The significant majority of the Firm's long-term unsecured funding is issued by JPMorgan Chase & Co ("the Parent Company") to provide maximum flexibility in support of both bank and nonbank subsidiary funding needs. The Parent Company advances substantially all net funding proceeds to its subsidiary, the Intermediate Holding Company ("IHC"). The IHC does not issue debt to external counterparties. For additional information on long-term debt, see Note 19 of JPMorgan Chase's 2018 Annual Report.

The Firm also raises secured long-term funding through securitization of consumer credit card loans and advances from the FHLBs.

The following table summarizes average short-term and long-term funding, excluding deposits, as reported on the Firm's Consolidated balance sheets, for the three months ended December 31, 2018. For additional information, see the Consolidated Balance Sheet Analysis on pages 52-53 and Liquidity Risk Management on pages 95-100 and Note 19 of the 2018 Form 10-K.

Sources of funds (excluding deposits)	
Three months ended December 31, 2018	
(in millions)	Average Amount
Total short-term unsecured funding	\$ 39,792
Total short-term secured funding ^(a)	\$ 221,385
Total long-term unsecured funding	\$ 224,776
Total long-term secured funding	\$ 64,059
Preferred stock ^(b)	\$ 26,602
Common stockholders' equity ^(b)	\$ 229,896

(a) Primarily consists of short-term securities loaned or sold under agreements to repurchase which are reported net on the Firm's Consolidated balance sheets when the relevant netting criteria under U.S. GAAP have been met.

(b) For additional information on preferred stock and common stockholders' equity see Capital Risk Management on pages 85-94, Consolidated statements of changes in stockholders' equity, Note 20 and Note 21 in the 2018 Form 10-K.

Off-balance sheet obligations and transactions

In addition to the sources of funds described above, the LCR rule also requires the Firm to apply prescribed outflow and inflow rates against off-balance sheet obligations and transactions, primarily the Firm's lending-related commitments and derivative contracts.

Off-balance sheet lending-related financial instruments, guarantees, and other commitments

In the normal course of business, the Firm enters into a number of off-balance sheet commitments to extend credit such as loan commitments, financial guarantees, standby letters of credit and commercial letters of credit to meet the financing needs of its customers. Unfunded commitments are the undrawn portion of such legally binding commitments to extend credit to customers. Unfunded commitments for (a) working capital and general corporate purposes, (b) extensions of credit to backstop commercial paper and other debt financings (whether in the form of a loan commitment, a letter of credit or a standby bond purchase agreement) in the event that those obligations cannot be refinanced or remarketed to new investors, and (c) committed liquidity facilities to clearing organizations, expose the Firm to varying levels of liquidity risk, and as such are subject to prescribed outflow rates under the LCR rule.

Additionally, the Firm provides other types of commitments in the form of financial instruments (e.g., certain credit lines) to its customers. The Firm can reduce or cancel these types of commitments by providing the borrower notice, or in some cases as permitted by law, without notice. Therefore, under the LCR rule, the notional amount of these commitments is not taken into consideration when calculating the Firm's net cash outflows.

Derivative contracts

Derivatives enable clients and counterparties to manage risks including credit risk and risks arising from fluctuations in interest rates, foreign exchange, equities, and commodities. The Firm makes markets in derivatives in order to meet these needs and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. The Firm also uses derivative instruments to manage its own credit and other market risk exposure. The LCR net cash outflows related to derivative contracts primarily reflect potential calls from counterparties for the Firm to post additional collateral in the form of variation margin or initial margin due to potential valuation changes or downgrades of the Firm's external credit ratings. In addition, the LCR net derivative cash outflows reflect counterparties' contractual right to substitute higher-quality collateral with lower quality collateral, as well as requiring the return of initial margin to clients. Substantially all of the Firm's OTC collateralized derivative transactions are required to be collateralized by HQLA eligible securities or cash which under the LCR rule results in limited outflows due to potential collateral valuation changes or collateral substitution. For additional information on derivative contracts, see pages 117-118 of the 2018 Form 10-K.

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 financial contingent 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 centralized, 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:

- Analyzing 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 CIO, Treasury and Corporate ("CTC") Chief Risk Officer ("CRO"), who reports to the Firm's CRO, as part of the Independent Risk Management ("IRM") function, 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;
- Performing independent review of liquidity risk management processes.

Internal stress testing

Liquidity stress tests are intended to ensure that the Firm has sufficient liquidity under a variety of adverse scenarios, including scenarios analyzed as part of the Firm's resolution and recovery planning. Stress scenarios are produced for the Parent Company 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 modeled across a range of time horizons and currency dimensions and contemplate both market and idiosyncratic stresses. As a result, these internal stress outflow assumptions may differ from the outflow assumptions prescribed in the LCR rule.

Risk governance

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. In addition, the Board of Directors' Risk Policy Committee ("DRPC") reviews and recommends to the Board of Directors, for formal approval, the Firm's liquidity risk tolerances, liquidity strategy, and liquidity policy at least annually. For further discussion of ALCO and other risk-related committees, refer to Enterprise-wide Risk Management on pages 79-140 of the 2018 Form 10-K.