Unaudited Half-yearly Financial Report

May 31, 2019

Goldman Sachs International Bank (unlimited company)

Company Number: 01122503

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Introduction

Goldman Sachs International Bank (the bank) is involved in lending and deposit-taking activities, securities lending and acts as a primary dealer for European government bonds. In March 2018, the bank's European government bond market-making activities were transferred to a group undertaking and in September 2018 the bank launched a digital deposit platform in the U.K., *Marcus: by Goldman Sachs*. The bank further continues to focus on the expansion of its lending and deposit-taking activities while remaining a primary dealer for European government bonds.

The bank's primary regulators are the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA).

The bank's ultimate parent undertaking and controlling entity is The Goldman Sachs Group, Inc. (Group Inc.). Group Inc. is a bank holding company and a financial holding company regulated by the Board of Governors of the Federal Reserve System. In relation to the bank, "group undertaking" means Group Inc. or any of its subsidiaries. Group Inc., together with its consolidated subsidiaries, form "GS Group". GS Group is a leading global investment banking, securities and investment management firm that provides a wide range of financial services to a substantial and diversified client base that includes corporations, financial institutions, governments and individuals. GS Group has a presence in Europe, the Middle East and Africa through a number of subsidiaries, including the bank.

The bank's principal office is in the U.K., but the bank also operates a branch in Germany (the Frankfurt branch), which is involved in lending activities, and has a representative office in China (the Beijing rep office). The bank has applied to launch a branch in South Africa during 2019 to further expand its client execution activities.

In 2018, the bank changed its accounting reference date from December 31 to November 30. As such, the bank's first half-year for 2019 is for the six months ended May 31, 2019, with comparative information being presented for the six months ended June 30, 2018. References to "the financial statements" are to the unaudited financial statements as presented in Part II of this financial report. All references to May 2019 and June 2018 refer to the periods ended, or the dates, as the context requires, May 31, 2019 and June 30, 2018, respectively. All references to November 2018 refer to the date November 30, 2018. All references to "the 2018 Annual Report" are to the bank's Annual Report for the period ended November 30, 2018.

All amounts in this financial report are prepared in accordance with United Kingdom Generally Accepted Accounting Practices (U.K. GAAP).

Executive Overview

Profit and Loss Account

The profit and loss account is set out on page 5 of this financial report. The bank's profit for the six months ended May 2019 was $51 million, compared with $59 million for the six months ended June 2018.

Total operating income was $189 million for the six months ended May 2019, compared with $157 million for the six months ended June 2018. This increase reflects the bank's continued focus on the expansion of its lending activities, the diversification of funding sources and management of excess liquidity.

Administrative expenses were $119 million for the six months ended May 2019, compared with $76 million for the six months ended June 2018. This increase reflects increased costs associated with lending activities and from the launch of the digital deposit platform.

Balance Sheet

The balance sheet is set out on page 6 of this financial report.

As of May 2019, total assets were $40.12 billion, an increase of $1.37 billion from November 2018, primarily reflecting an increase in customer accounts receivable of $2.99 billion, partially offset by a decrease in cash at bank and in hand of $2.58 billion. Customer accounts receivable increased primarily due to an increase in lending activities. Cash at bank and in hand decreased primarily due to a decrease in cash deposits held as Global Core Liquid Assets (GCLA).

As of May 2019, total liabilities were $36.95 billion, an increase of $1.31 billion from November 2018, primarily reflecting an increase in other liabilities of $1.09 billion. Other liabilities increased primarily due to an increase in other amounts due to group undertakings.

Key Metrics

The balance sheet includes the following amounts related to lending and deposit-taking activities.

	As of	
$ in thousands	**May 2019**	November 2018
Lending activities		
Included in customer accounts receivable:		
- Bank loans	**$ 7,298,626**	$ 4,073,045
- Mortgage-backed loans	**463,596**	147,734
Debt securities	**568,934**	604,259
Included in financial instruments owned:		
- Bank loans	**68,606**	78,459
- Mortgage-backed loans	**38,174**	27,131
Total lending activities	**$ 8,437,936**	$ 4,930,628
Deposit-taking activities		
Included in customer accounts payable:		
- Customer deposits	**$31,410,700**	$30,990,160
- Deposits from group undertakings	**948,297**	1,121,444
Deposits by banks	**340,525**	387,027
Total deposit-taking activities	**$32,699,522**	$32,498,631

The unfunded portion of bank loans held as principal risk was $5.31 billion as of May 2019 and $4.44 billion as of November 2018.

In addition to the lending activities detailed above, the bank reinvests funds generated from deposit-taking activities on both a secured and unsecured basis with group undertakings.

Business Environment

During the six months ended May 2019, global economic activity appeared to decrease compared with the eleven month period ended November 2018. Continued concerns about future global growth and a mixed macroeconomic environment led U.S. markets to anticipate multiple U.S. Federal Reserve rate cuts this year and other global central banks to emphasise accommodative monetary policies. In addition, market sentiment during the six months ended May 2019 was impacted by continued geopolitical uncertainty, including developments related to the U.K.'s decision to leave the E.U. (Brexit) and the threat of expanding trade wars between the U.S. and both China and Mexico.

Principal Risks and Uncertainties

The bank faces a variety of risks that are substantial and inherent in its businesses, including market, liquidity, credit, operational, model, legal, regulatory and reputational risks. Those risks and uncertainties are consistent with those described in the 2018 Annual Report.

Credit Ratings

The table below presents the unsecured credit ratings and outlook of the bank by Fitch, Inc. (Fitch), Moody's Investors Service (Moody's) and Standard & Poor's Ratings Services (S&P).

	As of May 2019		
	Fitch	**Moody's**	**S&P**
Short-term bank deposits	**F1**	**P-1**	**N/A**
Short-term debt	**F1**	**P-1**	**A-1**
Long-term bank deposits	**A**	**A1**	**N/A**
Long-term debt	**A**	**A1**	**A+**
Ratings outlook	**Stable**	**Stable**	**Stable**

In May 2019, Moody's changed the bank's ratings outlook from negative to stable.

Directors

E. H. Leouzon resigned from the board of directors on December 31, 2018.

C. G. Cripps was appointed to the board of directors on April 1, 2019.

There were no other changes in the directorship of the bank between the date of issue of this financial report and the 2018 Annual Report.

Date of Issue

This financial report was issued on August 9, 2019.

GOLDMAN SACHS INTERNATIONAL BANK (UNLIMITED COMPANY)

Profit and Loss Account (Unaudited)

		Six Months Ended	
		May	June
$ in thousands	**Note**	**2019**	2018
Interest receivable and similar income	5	**$ 499,728**	$ 359,352
Interest payable and similar expenses	6	**(402,593)**	(264,776)
Net interest income		**97,135**	94,576
Net gains on financial instruments measured at fair value		**81,574**	39,627
Fees and commissions		**24,189**	34,359
Impairments on financial assets		**(14,126)**	(11,131)
Total operating income	4	**188,772**	157,431
Administrative expenses	7	**(119,449)**	(75,502)
Profit before taxation		**69,323**	81,929
Tax on profit	8	**(18,759)**	(22,509)
Profit for the financial period		**$ 50,564**	$ 59,420

Profit before taxation of the bank is derived from continuing operations in the current and prior periods.

Statements of Comprehensive Income (Unaudited)

	Six Months Ended	
	May	June
$ in thousands	**2019**	2018
Profit for the financial period	**$ 50,564**	$ 59,420
Other comprehensive income		
Items that will not be reclassified subsequently to profit or loss		
Debt valuation adjustment	**5,728**	(7,274)
U.K. deferred tax attributable to components of other comprehensive income	**(1,443)**	1,964
Total items that will not be reclassified subsequently to profit or loss	**4,285**	(5,310)
Items that will be reclassified subsequently to profit or loss		
Translation losses	**(40)**	(128)
Total items that will be reclassified subsequently to profit or loss	**(40)**	(128)
Other comprehensive income/(loss) for the financial period, net of tax	**4,245**	(5,438)
Total comprehensive income for the financial period	**$ 54,809**	$ 53,982

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

Balance Sheet
(Unaudited)

		As of	
		May	November
$ in thousands	**Note**	**2019**	2018
Assets			
Cash at bank and in hand		**$ 4,399,425**	$ 6,984,034
Customer accounts receivable	9	**8,530,070**	5,536,255
Debt securities		**568,934**	604,259
Financial instruments owned	10	**867,767**	750,973
Collateralised agreements with group undertakings	11	**24,940,342**	24,072,549
Tangible fixed assets		**4,011**	–
Other assets	12	**807,462**	802,120
Total assets		**$40,118,011**	$38,750,190
Liabilities and shareholder's funds			
Customer accounts payable	13	**$32,667,609**	$32,444,570
Deposits by banks	14	**340,525**	387,027
Financial instruments sold, but not yet purchased	10	**1,023,719**	1,094,013
Collateralised financings with group undertakings	15	**129,073**	8,156
Other liabilities	16	**1,961,129**	875,277
Long-term subordinated loans from group undertakings	17	**826,000**	826,000
Total liabilities		**36,948,055**	35,635,043
Called up share capital	18	**62,558**	62,558
Share premium account		**2,094,303**	2,094,303
Accumulated other comprehensive income		**3,535**	(710)
Profit and loss account		**1,009,560**	958,996
Total shareholder's funds		**3,169,956**	3,115,147
Total liabilities and shareholder's funds		**$40,118,011**	$38,750,190
Memorandum items			
Financial commitments	19	**$ 8,105,771**	$ 7,479,103
Contingent liabilities	19	**$ 1,977,066**	$ 3,137,352

The accompanying notes are an integral part of these financial statements.
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Statements of Changes in Equity (Unaudited)

	Six Months Ended	
$ in thousands	**May 2019**	June 2018
Called up share capital		
Beginning balance	**$ 62,558**	$ 62,558
Ending balance	**62,558**	62,558
Share premium account		
Beginning balance	**2,094,303**	2,094,303
Ending balance	**2,094,303**	2,094,303
Accumulated other comprehensive income		
Beginning balance	**(710)**	(3,334)
Other comprehensive income/(loss)	**4,245**	(5,438)
Ending balance	**3,535**	(8,772)
Profit and loss account		
Beginning balance	**958,996**	880,171
Cumulative effect on retained earnings due to adoption of IFRS 9, net of tax	**–**	16,833
Profit for the financial period	**50,564**	59,420
Share-based payments	**89**	108
Management recharge related to share-based payments	**(89)**	(108)
Ending balance	**1,009,560**	956,424
Total shareholder’s funds	**$3,169,956**	$3,104,513

No dividends were paid for both the six months ended May 2019 and June 2018.

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

Note 1.

General Information

The bank is a private unlimited company and is incorporated and domiciled in England and Wales. The address of its registered office is Peterborough Court, 133 Fleet Street, London, EC4A 2BB, United Kingdom.

The bank's immediate parent undertaking and the parent company of the smallest group for which consolidated financial statements are prepared is Goldman Sachs Group UK Limited (GSG UK), a company incorporated and domiciled in England and Wales. Copies of its consolidated financial statements are available on request from the Company Secretary, GSG UK, Peterborough Court, 133 Fleet Street, London EC4A 2BB, United Kingdom. GSG UK together with its consolidated subsidiaries forms "GSG UK Group".

The ultimate controlling undertaking and the parent company of the largest group for which consolidated financial statements are prepared is The Goldman Sachs Group, Inc., a company incorporated in the United States of America. Copies of its consolidated financial statements, as well as certain regulatory filings, for example Quarterly Reports on Form 10-Q and the Annual Report on Form 10-K, that provide further information about GS Group and its business activities, can be obtained from Investor Relations, 200 West Street, New York, NY 10282, United States of America, GS Group's principal place of business, or at www.goldmansachs.com/shareholders.

Note 2.

Summary of Significant Accounting Policies

Basis of Preparation

The bank prepares financial statements under U.K. GAAP. These financial statements have been prepared in accordance with FRS 104 'Interim Financial Reporting' (FRS 104). These financial statements should be read in conjunction with the 2018 Annual Report, which has been prepared in accordance with FRS 101 'Reduced Disclosure Framework'.

Accounting Policies

The accounting policies and applicable disclosure exemptions applied are consistent with those described in the 2018 Annual Report.

Presentation Changes

The bank retrospectively changed the presentation of its profit and loss account to disaggregate trading profit into net gains on financial instruments measured at fair value, fees and commissions and impairments on financial assets.

Additionally, exchange of interest in currency derivative instruments related to funding products has been reclassified from net gains on financial instruments measured at fair value to interest payable and similar expenses. As a result, comparatives in Note 6 have been updated to reclassify losses of $88 million to interest payable and similar expenses.

Note 3.

Critical Accounting Estimates and Judgements

The critical accounting estimates and judgements are consistent with those described in the 2018 Annual Report.

Note 4.

Segment Reporting

The table below presents the total operating income of the bank's segments.

	Six Months Ended	
	May	June
$ in thousands	**2019**	2018
Investment Banking	**$ 49,742**	$ 23,333
Institutional Client Services	**107,002**	103,960
Investing & Lending	**8,376**	8,447
Investment Management	**22,652**	21,691
Total operating income	**$187,772**	$157,431

The bank reports its business segments in line with that of GS Group:

Investment Banking
Consists of underwriting and origination of debt instruments including European government bonds and bank loans.

Institutional Client Services
Consists of client execution activities related to making markets in European government bonds, secondary dealing in bank loans and securities lending.

Investing & Lending
Consists of lending activities which are typically longer-term in nature, including impairments and losses on bank loans, and certain deposit-taking activities including the digital deposit platform.

Investment Management
Consists of deposit-taking and lending activities with high-net-worth individuals.

Note 5.

Interest Receivable and Similar Income

The table below presents the bank's interest receivable and similar income.

	Six Months Ended	
	May	June
$ in thousands	**2019**	2018
Interest on loans to banks and customers	**$108,518**	$ 71,897
Interest on collateralised agreements with group undertakings	**249,857**	223,689
Interest on loans to group undertakings	**140,768**	13,858
Negative interest on loans from group undertakings	**585**	49,908
Total interest receivable and similar income	**$499,728**	$359,352

Note 6.

Interest Payable and Similar Expenses

The table below presents the bank's interest payable and similar expenses.

	Six Months Ended	
	May	June
$ in thousands	**2019**	2018
Interest on customer deposits and deposits by banks	**$200,595**	$129,176
Interest on loans from banks and customers	**13,084**	2,117
Interest on derivative instruments	**65,446**	88,188
Interest on long-term subordinated loans from group undertakings (see Note 17)	**24,180**	20,859
Interest on loans from group undertakings	**88,944**	21,555
Negative interest on collateralised agreements with group undertakings	**10,344**	2,881
Total interest payable and similar expenses	**$402,593**	$264,776

Note 7.

Administrative Expenses

The table below presents the bank's administrative expenses.

	Six Months Ended	
	May	June
$ in thousands	**2019**	2018
Management fees charged by group undertakings relating to staff costs	**$ 24,497**	$26,401
Management fees charged by group undertakings relating to other services	**14,929**	15,560
Direct costs of employment	**6,430**	4,631
Brokerage, clearing, exchange and distribution fees	**1,752**	3,020
Market development	**9,167**	1,836
Communications and technology	**104**	38
Occupancy	**589**	42
Professional fees	**4,139**	985
Other expenses	**57,842**	22,989
Total administrative expenses	**$119,449**	$75,502

In the table above, management fees charged by group undertakings includes service charges relating to operational and administrative support, and management services received from group undertakings.

Note 8.

Tax on Profit

The table below presents the bank's analysis of tax on profit.

	Six Months Ended	
	May	June
$ in thousands	**2019**	2018
Current tax		
U.K. corporation tax	**$19,886**	$20,116
Overseas taxation	**187**	499
Adjustments in respect of previous periods	**38**	(14)
Total current tax	**20,111**	20,601
Deferred tax		
Origination and reversal of temporary differences	**(1,352)**	1,908
Total deferred tax	**(1,352)**	1,908
Total tax on profit	**$18,759**	$22,509

Note 9.

Customer Accounts Receivable

The table below presents the bank's customer accounts receivable balances.

	As of	
	May	November
$ in thousands	**2019**	2018
Bank loans	**$7,298,626**	$4,073,045
Mortgage-backed loans	**463,596**	147,734
Amounts due from customers	**153,986**	126,923
Amounts due from group undertakings	**613,862**	1,188,553
Total customer accounts receivable	**$8,530,070**	$5,536,255

In the table above:

- Total customer accounts receivable included balances due in more than one year of $3.23 billion as of May 2019 and $1.95 billion as of November 2018.
- Bank loans and mortgage-backed loans included an allowance for impairment of $35 million as of May 2019 and $25 million as of November 2018.

Note 10.

Financial Instruments Owned and Financial Instruments Sold, But Not Yet Purchased

Financial instruments owned and financial instruments sold, but not yet purchased consists of financial instruments and investments within the operating activities of the bank. Financial instruments owned includes instruments pledged as collateral.

The table below presents the bank's financial instruments owned.

	As of	
	May	November
$ in thousands	**2019**	2018
Cash instruments		
Government bonds	**$ 85,211**	$ 26,232
Bank loans	**68,606**	78,459
Mortgage-backed loans	**38,174**	27,131
Total cash instruments	**191,991**	131,822
Derivative instruments		
Interest rates	**283,452**	258,319
Currencies	**283,551**	221,627
Equities	**41,194**	20,129
Commodities	**3,241**	2,741
Credit	**64,338**	116,335
Total derivative instruments	**675,776**	619,151
Total financial instruments owned	**$867,767**	$750,973

The table below presents the bank's financial instruments sold, but not yet purchased.

	As of	
	May	November
$ in thousands	**2019**	2018
Cash instruments		
Government bonds	**$ 24,076**	$ 11,285
Total cash instruments	**24,076**	11,285
Derivative instruments		
Interest rates	**238,288**	245,346
Currencies	**542,288**	569,006
Equities	**3,106**	2,602
Commodities	**3,241**	2,741
Credit	**185,976**	199,340
Total derivative instruments	**972,899**	1,019,035
Financial guarantee contracts	**26,744**	63,693
Total financial instruments sold, but not yet purchased	**$1,023,719**	$1,094,013

Note 11.

Collateralised Agreements with Group Undertakings

The table below presents the bank's collateralised agreements with group undertakings.

	As of	
	May	November
$ in thousands	**2019**	2018
Resale agreements	**$21,606,128**	$22,878,990
Securities borrowed	**3,253**	1,193,559
Debt securities	**1,759,384**	–
Other lending	**1,571,577**	–
Total collateralised agreements with group undertakings	**$24,940,342**	$24,072,549

In the table above, total collateralised agreements with group undertakings included balances due in more than one year of $3.71 billion as of May 2019 and $1.15 billion as of November 2018.

Note 12.

Other Assets

The table below presents the bank's other assets.

	As of	
	May	November
$ in thousands	**2019**	2018
Other amounts due from group undertakings	**$745,913**	$733,073
Deferred tax	**43,692**	45,157
Corporation tax receivable	**–**	489
Other assets	**17,857**	23,401
Total other assets	**$807,462**	$802,120

In the table above:

- Total other assets included balances due in more than one year of $716 million as of May 2019 and $723 million as of November 2018.
- Total other assets included financial assets of $762 million as of May 2019 and $751 million as of November 2018, and non-financial assets of $45 million as of May 2019 and $51 million as of November 2018.

Note 13.

Customer Accounts Payable

The table below presents the bank's customer accounts payable balances.

	As of	
	May	November
$ in thousands	**2019**	2018
Customer deposits	**$31,410,700**	$30,990,160
Amounts due to customers	**269,386**	209,403
Deposits from group undertakings	**948,297**	1,121,444
Amounts due to group undertakings	**39,226**	123,563
Total customer accounts payable	**$32,667,609**	$32,444,570

In the table above, total customer accounts payable included balances due in more than one year of $1.54 billion as of May 2019 and $2.43 billion as of November 2018.

Debt Valuation Adjustment

The fair value of customer deposits that are designated at fair value through profit or loss are calculated by discounting future cash flows at a rate which incorporates GS Group's credit spreads. The net debt valuation adjustment on such financial liabilities is a pre-tax gain of $6 million for the six months ended May 2019 and a pre-tax loss of $7 million for the six months ended June 2018, and has been included in debt valuation adjustment in other comprehensive income.

Note 14.

Deposits by Banks

Deposits by banks of $341 million as of May 2019 and $387 million as of November 2018, are due within one year of the balance sheet date.

Note 15.

Collateralised Financings with Group Undertakings

Collateralised financings with group undertakings of $129 million as of May 2019 and $8 million as of November 2018, consists of repurchase agreements and are due within one year of the balance sheet date.

Note 16.

Other Liabilities

The table below presents the bank's other liabilities.

	As of	
	May	November
$ in thousands	**2019**	2018
Accruals and deferred income	**$ 11,222**	$ 12,834
Other amounts due to group undertakings	**1,910,763**	854,049
Corporation tax payable	**14,318**	–
Other liabilities	**24,826**	8,394
Total other liabilities	**$1,961,129**	$875,277

In the table above:

- Total other liabilities included balances due in more than one year of $1.84 billion as of May 2019 and $823 million as of November 2018.
- Other liabilities included an allowance for impairment in respect of unfunded bank loans and mortgage-backed loans held at amortised cost of $11 million as of May 2019 and $6 million as of November 2018.
- Total other liabilities included financial liabilities of $1.95 billion as of May 2019 and $875 million as of November 2018, and non-financial liabilities of $14 million as of May 2019 and $nil as of November 2018.

Note 17.

Long-Term Subordinated Loans from Group Undertakings

Long-term subordinated loans from group undertakings are unsecured and carry interest at a margin over the U.S. Federal Reserve's federal funds rate and constitute regulatory capital as approved by the PRA. Long-term subordinated loans from group undertakings are repayable on September 8, 2025. Any repayment prior to this maturity date requires PRA approval.

Note 18.

Share Capital

The table below presents the bank's share capital.

Allotted, called up and fully paid	**Ordinary shares of £1 each**	***$ in thousands***
As of December 1, 2018	40,169,994	$62,558
As of May 31, 2019	**40,169,994**	**$62,558**

Note 19.

Financial Commitments and Contingencies

Financial Commitments

The table below presents the bank's financial commitments.

	As of	
	May	November
$ in thousands	**2019**	2018
Principal risk	**$5,305,093**	$4,440,665
Sub-participated	**2,105,004**	1,803,365
Unfunded bank loans and mortgage backed-loans	**7,410,097**	6,244,030
Forward starting resale agreements	**280,481**	785,661
Forward starting repurchase agreements	**320,294**	420,792
Leases	**4,492**	2,099
Other	**407**	26,521
Total financial commitments	**$8,105,771**	$7,479,103

The bank originates a number of bank loans which are held as principal risk. The bank also holds bank loans which are sub-participated to group undertakings and third party institutions. The unfunded portion of these agreements, where cash has not been deposited with the bank to collateralise the undrawn commitment is presented above.

The bank enters into repurchase and resale agreements that settle at a future date, generally within three business days. The bank's funding of these commitments depends on the satisfaction of all contractual conditions to the resale agreement and these commitments can expire unused.

Other commitments relate to investment and collateral commitments.

Contingent Liabilities

The bank, in its capacity as an agent in securities lending, indemnifies most of its securities lending customers against losses incurred in the event that borrowers do not return securities. The maximum exposure to loss under guarantees was $1.31 billion as of May 2019 and $2.08 billion as of November 2018. The market value of the collateral held to cover the loss was $1.48 billion as of May 2019 and $2.36 billion as of November 2018.

The bank has contingent liabilities in relation to financial guarantee contract written of $665 million as of May 2019 and $1.05 billion as of November 2018. This represents the maximum exposure in excess of the amount recorded on the balance sheet as financial guarantee contracts (see Note 10).

Note 20.

Financial Assets and Financial Liabilities

Financial Assets and Financial Liabilities by Category

The tables below present the carrying value of the bank's financial assets and financial liabilities by category.

	Financial Assets		
$ in thousands	Mandatorily at fair value	Amortised cost	Total
As of May 2019			
Cash at bank and in hand	**$ –**	**$ 4,399,425**	**$ 4,399,425**
Customer accounts receivable	**2,238,222**	**6,291,848**	**8,530,070**
Debt securities	**66,365**	**502,569**	**568,934**
Financial instruments owned	**867,767**	**–**	**867,767**
Collateralised agreements with group undertakings	**24,940,342**	**–**	**24,940,342**
Other assets	**–**	**762,389**	**762,389**
Total financial assets	**$28,112,696**	**$11,956,231**	**$40,068,927**
As of November 2018			
Cash at bank and in hand	$ –	$ 6,984,034	$ 6,984,034
Customer accounts receivable	115,955	5,420,300	5,536,255
Debt securities	68,931	535,328	604,259
Financial instruments owned	750,973	–	750,973
Collateralised agreements with group undertakings	24,072,549	–	24,072,549
Other assets	–	751,108	751,108
Total financial assets	$25,008,408	$13,690,770	$38,699,178

	Financial Liabilities			
$ in thousands	Held for trading	Designated at fair value	Amortised cost	Total
As of May 2019				
Customer accounts payable	$ –	**$10,973,893**	**$21,693,716**	**$32,667,609**
Deposits by banks	–	**340,525**	–	**340,525**
Financial instruments sold, but not yet purchased	**996,975**	**26,744**	–	**1,023,719**
Collateralised financings with group undertakings	–	**129,073**	–	**129,073**
Other liabilities	–	**1,210,048**	**737,120**	**1,947,168**
Long-term subordinated loans from group undertakings	–	–	**826,000**	**826,000**
Total financial liabilities	**$ 996,975**	**$12,680,283**	**$23,256,836**	**$36,934,094**
As of November 2018				
Customer accounts payable	$ –	$16,822,930	$15,621,640	$32,444,570
Deposits by banks	–	387,027	–	387,027
Financial instruments sold, but not yet purchased	1,030,320	63,693	–	1,094,013
Collateralised financings with group undertakings	–	8,156	–	8,156
Other liabilities	–	293,522	581,755	875,277
Long-term subordinated loans from group undertakings	–	–	826,000	826,000
Total financial liabilities	$1,030,320	$17,575,328	$17,029,395	$35,635,043

In the tables above, financial instruments owned included $37 million as of May 2019 and $16 million as of November 2018, and financial instruments sold, but not yet purchased included $nil as of May 2019 and $1 million as of November 2018, of derivative instruments designated as hedges.

Fair Value Hierarchy

The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. The bank measures certain financial assets and financial liabilities as a portfolio (i.e., based on its net exposure to market and/or credit risks).

U.K. GAAP has a three-level fair value hierarchy for disclosure of fair value measurements. The fair value hierarchy prioritises inputs to the valuation techniques used to measure fair value, giving the highest priority to level 1 inputs and the lowest priority to level 3 inputs. A financial asset or financial liability's level in the fair value hierarchy is based on the lowest level of input that is significant to its fair value measurement.

The fair value hierarchy is as follows:

Level 1. Inputs are unadjusted quoted prices in active markets to which the bank had access at the measurement date for identical, unrestricted assets or liabilities.

Level 2. Inputs to valuation techniques are observable, either directly or indirectly.

Level 3. One or more inputs to valuation techniques are significant and unobservable.

The fair values for substantially all of the bank's financial assets and financial liabilities that are fair valued on a recurring basis are based on observable prices and inputs and are classified in levels 1 and 2 of the fair value hierarchy. Certain level 2 and level 3 financial assets and financial liabilities may require appropriate valuation adjustments that a market participant would require to arrive at fair value for factors such as counterparty and GS Group's credit quality, funding risk, transfer restrictions, liquidity and bid/offer spreads. Valuation adjustments are generally based on market evidence.

Valuation Techniques and Significant Inputs

Cash Instruments. Cash instruments include government bonds, bank loans and mortgage-backed loans. Valuation techniques and significant inputs for each level of the fair value hierarchy include:

Level 1 Cash Instruments

Level 1 cash instruments are valued using quoted prices for identical unrestricted instruments in active markets. The bank defines active markets for debt instruments based on both the average daily trading volume and the number of days with trading activity.

Level 2 Cash Instruments

Level 2 cash instruments can be verified to quoted prices, recent trading activity for identical or similar instruments, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Valuation adjustments are typically made to level 2 cash instruments (i) if the cash instrument is subject to transfer restrictions and/or (ii) for other premiums and liquidity discounts that a market participant would require to arrive at fair value. Valuation adjustments are generally based on market evidence.

Level 3 Cash Instruments

Level 3 cash instruments have one or more significant valuation inputs that are not observable. Absent evidence to the contrary, level 3 cash instruments are initially valued at transaction price, which is considered to be the best initial estimate of fair value. Subsequently, the bank uses other methodologies to determine fair value, which vary based on the type of instrument. Valuation inputs and assumptions are changed when corroborated by substantive observable evidence, including values realised on sales of financial assets.

Valuation techniques of level 3 cash instruments vary by instrument, but are generally based on discounted cash flow techniques. The valuation techniques and the nature of significant inputs used to determine the fair values of each type of level 3 cash instrument are described below.

- **Bank Loans and Mortgage-Backed Loans (Bank Loans and Mortgages).** Significant inputs are generally determined based on relative value analyses and include:
  - Market yields implied by transactions of similar or related assets;
  - Current levels and changes in market indices, such as the iTraxx and CDX (indices that track the performance of corporate credit and loans, respectively);
  - Current performance of the borrower or loan collateral and recovery assumptions if a default occurs; and
  - Timing of expected future cash flows (duration) which, in certain cases, may incorporate the impact of other unobservable inputs (e.g., prepayment speeds).

Derivative Instruments. Derivatives may be traded on an exchange (exchange-traded) or they may be privately negotiated contracts, which are usually referred to as OTC derivatives. Certain of the bank's OTC derivatives are cleared and settled through central clearing counterparties (OTC-cleared), while others are bilateral contracts between two counterparties (bilateral OTC).

The bank's level 2 and level 3 derivatives are valued using derivative pricing models (e.g., discounted cash flow models, correlation models, and models that incorporate option pricing methodologies, such as Monte Carlo simulations). Price transparency of derivatives can generally be characterised by product type, as described below.

- **Interest Rate.** In general, the key inputs used to value interest rate derivatives are transparent, even for most long-dated contracts. Interest rate swaps and options denominated in the currencies of leading industrialised nations are characterised by high trading volumes and tight bid/offer spreads. Interest rate derivatives that reference indices, such as an inflation index, or the shape of the yield curve (e.g., 10-year swap rate vs. 2-year swap rate) are more complex, but the key inputs are generally observable.

- **Credit.** Price transparency for credit default swaps, including both single names and baskets of credits, varies by market and underlying reference entity or obligation. Credit default swaps that reference indices, large corporates and major sovereigns generally exhibit the most price transparency. For credit default swaps with other underliers, price transparency varies based on credit rating, the cost of borrowing the underlying reference obligations, and the availability of the underlying reference obligations for delivery upon the default of the issuer. Credit default swaps that reference loans, asset-backed securities and emerging market debt instruments tend to have less price transparency than those that reference corporate bonds. In addition, more complex credit derivatives, such as those sensitive to the correlation between two or more underlying reference obligations, generally have less price transparency.
- **Currency.** Prices for currency derivatives based on the exchange rates of leading industrialised nations, including those with longer tenors, are generally transparent. The primary difference between the price transparency of developed and emerging market currency derivatives is that emerging markets tend to be observable for contracts with shorter tenors.
- **Equity.** Price transparency for equity derivatives varies by market and underlier. Options on indices and the common stock of corporates included in major equity indices exhibit the most price transparency. Equity derivatives generally have observable market prices, except for contracts with long tenors or reference prices that differ significantly from current market prices. More complex equity derivatives, such as those sensitive to the correlation between two or more individual stocks, generally have less price transparency.

Liquidity is essential to observability of all product types. If transaction volumes decline, previously transparent prices and other inputs may become unobservable. Conversely, even highly structured products may at times have trading volumes large enough to provide observability of prices and other inputs.

Level 1 Derivatives

Level 1 derivatives include short-term contracts for future delivery of securities when the underlying security is a level 1 instrument, and exchange-traded derivatives if they are actively traded and are valued at their quoted market price.

Level 2 Derivatives

Level 2 derivatives include OTC derivatives for which all significant valuation inputs are corroborated by market evidence and exchange-traded derivatives that are not actively traded and/or that are valued using models that calibrate to market-clearing levels of OTC derivatives. In evaluating the significance of a valuation input, the bank considers, among other factors, a portfolio’s net risk exposure to that input.

The selection of a particular model to value a derivative depends on the contractual terms of and specific risks inherent in the instrument, as well as the availability of pricing information in the market. For derivatives that trade in liquid markets, model selection does not involve significant management judgement because outputs of models can be calibrated to market-clearing levels.

Valuation models require a variety of inputs, such as contractual terms, market prices, yield curves, discount rates (including those derived from interest rates on collateral received and posted as specified in credit support agreements for collateralised derivatives), credit curves, measures of volatility and correlations of such inputs. Significant inputs to the valuations of level 2 derivatives can be verified to market transactions, broker or dealer quotations or other alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Level 3 Derivatives

Level 3 derivatives are valued using models which utilise observable level 1 and/or level 2 inputs, as well as unobservable level 3 inputs. Unobservable inputs include certain correlations, as well as credit spreads and equity volatility inputs.

Subsequent to the initial valuation of a level 3 derivative, the bank updates the level 1 and level 2 inputs to reflect observable market changes and any resulting gains and losses are classified in level 3. Level 3 inputs are changed when corroborated by evidence such as similar market transactions, third-party pricing services and/or broker or dealer quotations or other empirical market data. In circumstances where the bank cannot verify the model value by reference to market transactions, it is possible that a different valuation model could produce a materially different estimate of fair value.

Valuation Adjustments

Valuation adjustments are integral to determining the fair value of derivative portfolios and are used to adjust the mid-market valuations produced by derivative pricing models to the appropriate exit price valuation. These adjustments incorporate bid/offer spreads, the cost of liquidity, credit valuation adjustments and funding valuation adjustments, which account for the credit and funding risk inherent in the uncollateralised portion of derivative portfolios. The bank also makes funding valuation adjustments to collateralised derivatives where the terms of the agreement do not permit the bank to deliver or repledge collateral received. Market-based inputs are generally used when calibrating valuation adjustments to market-clearing levels.

In addition, for derivatives that include significant unobservable inputs, the bank makes model or exit price adjustments to account for the valuation uncertainty present in the transaction.

Other Financial Assets and Financial Liabilities. Valuation techniques and significant inputs of financial assets and financial liabilities include:

- **Customer Accounts Receivable.** Customer accounts receivable measured at fair value consists of certain bank loans and mortgages. The significant inputs to the valuation of bank loans and mortgages are consistent with those described above as part of cash instruments.
- **Debt Securities.** Debt securities measured at fair value consists of mortgage-backed securities. The significant inputs to the valuation of debt securities are consistent with those described above as part of cash instruments.
- **Collateralised Agreements With Group Undertakings and Collateralised Financings With Group Undertakings.** The significant inputs to the valuation of resale and repurchase agreements and securities borrowed are funding spreads, the amount and timing of expected future cash flows and interest rates.
- **Customer Accounts Payable and Deposits by Banks.** Customer accounts payable and deposits by banks measured at fair value consists of certain balances related to deposit-taking activities. The significant inputs to the valuation of these balances are interest rates and the amount and timing of future cash flows.
- **Financial Guarantee Contracts.** The significant inputs to the valuation of financial guarantee contracts designated at fair value is consistent with those described above in relation to level 2 derivative instruments.

Fair Value of Financial Assets and Financial Liabilities by Level

The tables below present, by level within the fair value hierarchy, financial assets and financial liabilities measured at fair value on a recurring basis.

$ in thousands	Level 1	Level 2	Level 3	Total
As of May 2019				
Financial Assets				
Customer accounts receivable	**$ –**	**$ 1,804,826**	**$433,396**	**$ 2,238,222**
Debt securities	**–**	**18,641**	**47,724**	**66,365**
Cash instruments	**–**	**163,790**	**28,201**	**191,991**
Derivative instruments	**–**	**674,833**	**943**	**675,776**
Financial instruments owned	**–**	**838,623**	**29,144**	**867,767**
Collateralised agreements with group undertakings	**–**	**24,940,342**	**–**	**$24,940,342**
Total financial assets	**$ –**	**$27,602,432**	**$510,264**	**$28,112,696**
Financial Liabilities				
Customer accounts payable	**$ –**	**$10,973,893**	**$ –**	**$10,973,893**
Deposits by banks	**–**	**340,525**	**–**	**340,525**
Cash instruments	**–**	**24,076**	**–**	**24,076**
Derivative instruments	**–**	**925,147**	**74,496**	**999,643**
Financial instruments sold, but not yet purchased	**–**	**949,223**	**74,496**	**1,023,719**
Collateralised financings with group undertakings	**–**	**129,073**	**–**	**129,073**
Other liabilities	**–**	**1,210,048**	**–**	**1,210,048**
Total financial liabilities	**$ –**	**$13,602,762**	**$ 74,496**	**$13,677,258**
Net derivative instruments	**$ –**	**$ (250,314)**	**$(73,553)**	**$ (323,867)**
As of November 2018				
Financial Assets				
Customer accounts receivable	$ –	$ 65,806	$ 50,149	$ 115,955
Debt securities	–	19,837	49,094	68,931
Cash instruments	2,230	102,298	27,294	131,822
Derivative instruments	28,957	587,500	2,694	619,151
Financial instruments owned	31,187	689,798	29,988	750,973
Collateralised agreements with group undertakings	–	24,072,549	–	24,072,549
Total financial assets	$31,187	$24,847,990	$129,231	$25,008,408
Financial Liabilities				
Customer accounts payable	$ –	$16,822,930	$ –	$16,822,930
Deposits by banks	–	387,027	–	387,027
Cash instruments	2,499	8,786	–	11,285
Derivative instruments	28,957	975,268	78,503	1,082,728
Financial instruments sold, but not yet purchased	31,456	984,054	78,503	1,094,013
Collateralised financings with group undertakings	–	8,156	–	8,156
Other liabilities	–	293,522	–	293,522
Total financial liabilities	$31,456	$18,495,689	$ 78,503	$18,605,648
Net derivative instruments	$ –	$ (387,768)	$(75,809)	$ (463,577)

Significant Unobservable Inputs Used in Level 3 Fair Value Measurements

The bank had level 3 bank loans and mortgages and debt securities assets of $509 million (consisting of customer accounts receivable of $433 million, debt securities of $48 million and cash instruments of $28 million) as of May 2019 and $127 million (consisting of customer accounts receivable of $50 million, debt securities of $49 million and cash instruments of $27 million) as of November 2018.

The table below presents the amount of level 3 bank loans and mortgages, and ranges and weighted averages of significant unobservable inputs used to value the bank's level 3 bank loans and mortgages.

	Level 3 Bank Loans and Mortgages and Range of Significant Unobservable Inputs (Weighted Average) as of	
$ in thousands	**May 2019**	November 2018
Bank loans and mortgages	**$509,321**	$126,537
Yield	**2.7% to 20.2% (4.3%)**	2.2% to 17.0% (6.8%)
Recovery rate	**70.0% to 70.0% (70.0%)**	70.0% to 70.0% (70.0%)
Duration (years)	**1.2 to 7.7 (2.5)**	2.5 to 9.0 (3.2)

In the table above:

- Ranges represent the significant unobservable inputs that were used in the valuation.
- Weighted averages are calculated by weighing each input by the relative fair value of the bank loans and mortgages.
- The ranges and weighted averages of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one bank loan or mortgage. For example, the highest yield for bank loans and mortgages is appropriate for valuing a specific bank loan or mortgage but may not be appropriate for valuing any other bank loan or mortgage. Accordingly, the ranges of inputs do not represent uncertainty in, or possible ranges of, fair value measurements of the bank's level 3 bank loans and mortgages.
- Increases in yield or duration used in the valuation of the bank's level 3 bank loans and mortgages would result in a lower fair value measurement, while increases in recovery rate would result in a higher fair value measurement.
- Bank loans and mortgages are valued using discounted cash flows.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, market comparables and discounted cash flows may be used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.

Derivative Instruments. The bank had net level 3 derivative liabilities of $74 million as of May 2019 and $76 million as of November 2018.

The table below presents the amount of net level 3 derivative instruments and ranges of significant unobservable inputs used to value the bank's derivative instruments.

	Net Level 3 Derivative Instruments and Range of Significant Unobservable Inputs (Average/Median) as of	
$ in thousands	**May 2019**	November 2018
Credit	**$(73,553)**	$(75,809)
Credit spreads (bps)	**900 to 900 (900/900)**	900 to 900 (900/900)

In the table above, net derivative liabilities are shown as negative amounts.

As of both May 2019 and November 2018, the bank's net level 3 derivative instruments materially represents derivative instruments with group undertakings, and were economically hedged with other classes of financial assets and liabilities.

Transfers Between Level 1 and Level 2 of the Fair Value Hierarchy

During both the six months ended May 2019 and June 2018, there were no significant transfers between level 1 and level 2 financial assets and financial liabilities measured at fair value on a recurring basis.

Level 3 Rollforward

The table below presents a summary of the changes in fair value for all level 3 financial assets and financial liabilities measured at fair value on a recurring basis. Gains and losses arising on level 3 assets are recognised within net (losses)/gains on financial instruments measured at fair value in the profit and loss account. In the table below:

- If a financial asset or financial liability was transferred to level 3 during a reporting period, its entire gain or loss for the period is included in level 3. For level 3 financial assets, increases are shown as positive amounts, while decreases are shown as negative amounts. For level 3 financial liabilities, increases are shown as negative amounts, while decreases are shown as positive amounts.
- Transfers between levels are recognised at the beginning of the reporting period in which they occur. Accordingly, the tables do not include gains or losses for level 3 financial assets and financial liabilities that were transferred out of level 3 prior to the end of the period.
- Level 3 financial assets and financial liabilities are frequently economically hedged with level 1 and level 2 financial assets and financial liabilities. Accordingly, level 3 gains or losses that are reported in the table below for a particular class of financial asset or financial liability can be partially offset by gains or losses attributable to level 1 or level 2 in the same class of financial asset or financial liability or gains or losses attributable to level 1, level 2 or level 3 in a different class of financial asset or financial liability. As a result, gains or losses included in the level 3 rollforward below do not necessarily represent the overall impact on the bank's results of operations, liquidity or capital resources.

	Level 3 Financial Assets and Financial Liabilities at Fair Value							
$ in thousands	Balance, beginning of period	Gains/ (losses)	Purchases	Sales	Settlements	Transfers into level 3	Transfers out of level 3	Balance, end of period
Six Months Ended May 2019								
Customer accounts receivable	**$ 50,149**	**$ (100)**	**$247,299**	**$(47,938)**	**$ (8)**	**$183,994**	**$ –**	**$433,396**
Debt securities	**49,094**	**(516)**	**–**	**–**	**(1,983)**	**1,129**	**–**	**47,724**
Financial instruments owned	**29,988**	**2,844**	**5,408**	**–**	**(6,402)**	**–**	**(2,694)**	**29,144**
Total level 3 financial assets	**$129,231**	**$ 2,228**	**$252,707**	**$(47,938)**	**$ (8,393)**	**$185,123**	**$(2,694)**	**$510,264**
Financial instruments sold, but not yet purchased	**$(78,503)**	**$(2,406)**	$ –	**$ 350**	**$ 3,741**	$ –	**$ 2,322**	**$(74,496)**
Total level 3 financial liabilities	**$(78,503)**	**$(2,406)**	$ –	**$ 350**	**$ 3,741**	$ –	**$ 2,322**	**$(74,496)**
Six Months Ended June 2018								
Customer accounts receivable	$ 48,479	$(3,583)	$ –	$ (7,745)	$ (1,493)	$ 93,753	$ –	$129,411
Debt securities	48,906	2,932	4	–	(1,640)	–	–	50,202
Financial instruments owned	32,959	3,778	–	(14)	(7,204)	–	–	29,519
Total level 3 financial assets	$130,344	$ 3,127	$ 4	$ (7,759)	$(10,337)	$ 93,753	$ –	$209,132
Financial instruments sold, but not yet purchased	$ (1,247)	$(2,406)	$ –	$ (319)	$ 3,514	$(78,884)	$ –	$(79,342)
Total level 3 financial liabilities	$ (1,247)	$(2,406)	$ –	$ (319)	$ 3,514	$(78,884)	$ –	$(79,342)

Transfers Between Level 2 and Level 3 of the Fair Value Hierarchy

During the six months ended May 2019, transfers into level 3 for financial assets primarily reflected transfers of certain credit products from level 2, principally due to reduced transparency of certain spread and yield inputs. The reduced transparency was a result of a lack of market evidence.

Fair Value Financial Assets and Financial Liabilities Valued Using Techniques That Incorporate Unobservable Inputs

The fair value of financial assets and financial liabilities may be determined in whole or part using a valuation technique based on assumptions that are not supported by prices from observable current market transactions in the same instrument or based on available observable market data and changing these assumptions will change the resultant estimate of fair value. The potential impact of using reasonable possible alternative assumptions for the valuations, including significant unobservable inputs was not material as of both May 2019 and June 2018.

Fair Value of Financial Assets and Financial Liabilities Not Measured at Fair Value

The bank had financial assets of $11.97 billion as of May 2019 and $13.69 billion as of November 2018, and financial liabilities of $23.27 billion as of May 2019 and $17.03 billion as of November 2018 that are not measured at fair value. Given the short-term nature of these instruments, their carrying amounts in the balance sheet are a reasonable approximation of fair value. The interest rate associated with long-term subordinated loans from group undertakings is variable in nature and approximates prevailing market interest rates for instruments with similar terms and characteristics. As such, the carrying amount in the balance sheet is a reasonable approximation of fair value.

Note 21.

Maximum Exposure to Credit Risk – Financial Assets Subject to Impairment

The table below presents an analysis of the credit risk exposure for bank loans and mortgage-backed loans for which an allowance for impairment is recognised. The gross carrying amount of financial assets below also represents the bank's maximum exposure to credit risk on these financial assets.

$ in thousands	Stage 1	Stage 2	Stage 3	Total
As of May 2019				
Credit Rating Equivalent				
Investment grade	**$2,902,549**	**$ –**	**$ –**	**$2,902,549**
Non-investment grade	**2,500,768**	**137,593**	**18,278**	**2,656,639**
Gross carrying amount	**5,403,317**	**137,593**	**18,278**	**5,559,188**
Allowance for impairment	**(25,072)**	**(8,489)**	**(1,627)**	**(35,188)**
Carrying amount	**$5,378,245**	**$129,104**	**$16,651**	**$5,524,000**
As of November 2018				
Credit Rating Equivalent				
Investment grade	$2,354,333	$ –	$ –	$2,354,333
Non-investment grade	1,703,430	72,404	–	1,775,834
Gross carrying amount	4,057,763	72,404	–	4,130,167
Allowance for impairment	(17,125)	(8,218)	–	(25,343)
Carrying amount	$4,040,638	$64,186	$ –	$4,104,824

In addition to the modelled expected credit loss (ECL), a management overlay of $13 million as of May 2019 and $8 million as of November 2018 has been included in the allowance for impairment above. The overlay reflects management's judgement that the economic scenarios used within the model do not fully capture all relevant risk factors such as the emergence of new economic or political risk factors that are incorporated into the current model. The overlay amount is reviewed regularly by Credit Risk Management as part of their ongoing review process.

The bank also has credit risk exposure to the following financial assets where the allowance for impairment is not material:

- Cash at bank and in hand of $4.40 billion as of May 2019 and $6.98 billion as of November 2018;
- Customer accounts receivable of $768 million as of May 2019 and $1.32 billion as of November 2018;
- Debt securities of $503 million as of May 2019 and $535 million as of November 2018; and
- Other assets of $762 million as of May 2019 and $751 million as of November 2018.

The bank has also recognised an allowance for impairment in respect of unfunded bank loans and mortgage-backed loans of $11 million as of May 2019 and $6 million as of November 2018. The table below presents an analysis of the credit risk exposure for unfunded bank loans and mortgage-backed loans for which an allowance for impairment is recognised.

$ in thousands	Stage 1	Stage 2	Total
As of May 2019			
Credit Rating Equivalent			
Investment grade	**$3,273,931**	**$ –**	**$3,273,931**
Non-investment grade	**1,632,123**	**113,580**	**1,745,703**
Unfunded bank loans and mortgage backed-loans	**$4,906,054**	**$113,580**	**$5,019,634**
Allowance for impairment	**$ (10,133)**	**$ (776)**	**$ (10,909)**
As of November 2018			
Credit Rating Equivalent			
Investment grade	$2,775,535	$ –	$2,775,535
Non-investment grade	1,519,773	89,546	1,609,319
Unfunded bank loans and mortgage backed-loans	$4,295,308	$89,546	$4,384,854
Allowance for impairment	$ (5,241)	$ (694)	$ (5,935)

In addition to the modelled ECL, a management overlay of $5 million as of May 2019 and $3 million as of November 2018 has been included in the allowance for impairment above.

Collateral and Other Credit Enhancements

The bank employs a range of policies and practices to mitigate credit risk. The most common of these is accepting collateral for funds advanced. The bank has internal policies on the acceptability of specific classes of collateral or credit risk mitigation. The bank prepares a valuation of the collateral obtained as part of the loan origination process. This assessment is reviewed periodically.

The bank closely monitors collateral held for financial assets considered to be credit-impaired, as it becomes more likely that the bank will take possession of collateral to mitigate potential credit losses. Credit-impaired financial assets were $17 million as of May 2019 and $nil as of November 2018.