Structural interest rate risk can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve)
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, firmwide basis. Business units transfer their interest rate risk to Treasury and CIO through funds transfer pricing, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

The Firm generates a baseline for net interest income and certain interest rate-sensitive fees, and then conducts simulations of changes for interest rate-sensitive assets and liabilities denominated in U.S. dollars and other currencies ("non-U.S. dollar" currencies). This simulation primarily includes retained loans, deposits, deposits with banks, investment securities, long term debt and any related interest rate hedges, and excludes other positions in risk management VaR and other sensitivity-based measures as described on page 125.

Earnings-at-risk scenarios estimate the potential change in this baseline, over the following 12 months utilizing multiple assumptions. These scenarios include a parallel shift involving changes to both short-term and long-term rates by an equal amount; a steeper yield curve involving holding short-term rates constant and increasing long-term rates or decreasing short-term rates and holding long-term rates constant; and a flatter yield curve involving holding short-term rates constant and decreasing long-term rates or increasing short-term rates and holding long-term rates constant. These scenarios consider the impact on exposures as a result of changes in interest rates from baseline rates, as well as pricing sensitivities of deposits, optionality and changes in product mix. The scenarios include forecasted balance sheet changes, as well as modeled prepayment and reinvestment behavior, but do not include assumptions about actions that could be taken by the Firm in response to any such instantaneous rate changes. Mortgage prepayment assumptions are based on the interest rates used in the scenarios compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience. The pricing sensitivity of deposits in the baseline and scenarios use assumed rates paid which may differ from actual rates paid due to timing lags and other factors. The Firm's earnings-at-risk scenarios are periodically evaluated and enhanced in response to changes in the composition of the Firm's balance sheet, changes in market conditions, improvements in the Firm's simulation and other factors.

The Firm's U.S. dollar sensitivities are presented in the table below.

December 31, (in billions)	2018	2017
Parallel shift:		
+100 bps shift in rates	**$ 0.9**	$ 1.7
-100 bps shift in rates	**(2.1)**	(3.6)
Steeper yield curve:		
+100 bps shift in long-term rates	**0.5**	0.7
-100 bps shift in short-term rates	**(1.2)**	(2.2)
Flatter yield curve:		
+100 bps shift in short-term rates	**0.4**	1.0
-100 bps shift in long-term rates	**(0.9)**	(1.4)

The Firm's sensitivity to rates is largely a result of assets repricing at a faster pace than deposits.

The Firm's net U.S. dollar sensitivities as of December 31, 2018 decreased when compared to December 31, 2017 primarily as a result of updating the Firm's baseline to reflect higher interest rates. As higher interest rates are now reflected in the Firm's baselines, sensitivities to changes in rates are expected to be less significant.

The Firm's non-U.S. dollar sensitivities are presented in the table below.

December 31, (in billions)	2018	2017
Parallel shift:		
+100 bps shift in rates	**$ 0.5**	$ 0.5
Flatter yield curve:		
+100 bps shift in short-term rates	**0.5**	0.5

The results of the non-U.S. dollar interest rate scenario involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels were not material to the Firm's earnings-at-risk at December 31, 2018 and 2017.