

## WEEKLY INDICATORS OF FINANCIAL STRESS

### TRENDS AND DEVELOPMENTS

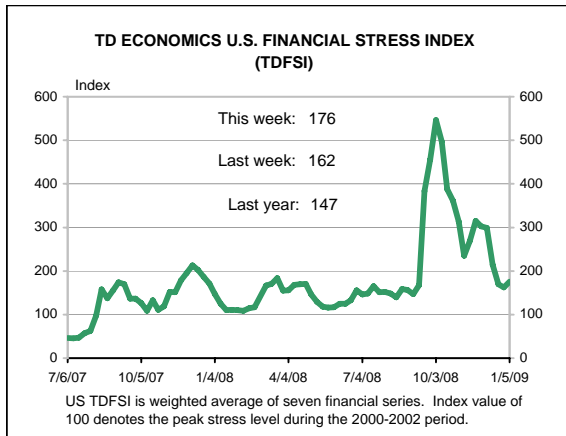
- The TD Economics Financial Stress Index (TDFSI) was little changed for the US and Canada over the holiday break.
- In the U.S., the relief seen in early December has generally been sustained. While LIBOR-OIS spreads have remained relatively stable, CP spreads, and ABCP in particular, have shown remarkable improvement and are at or near their lows for the last year.
- This improved atmosphere has helped bring 30-year mortgage rates down to 2004 levels.
- In Canada, the level of financial stress has been relatively unchanged over the last two months. Initial improvements in short-term pressures were generally offset by rising medium-term funding costs, but neither has moved much over the last week, leaving the Canadian TDFSI higher than its US counterpart for the last three weeks.

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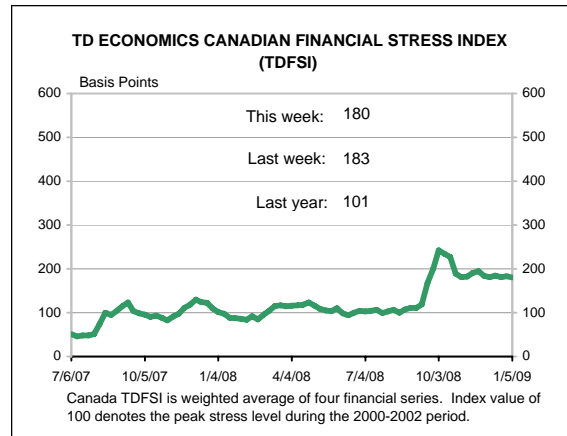
Beata Caranci, Director of Economic Forecasting  
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### SUMMARY LIQUIDITY AND FINANCIAL STRESS INDICATORS

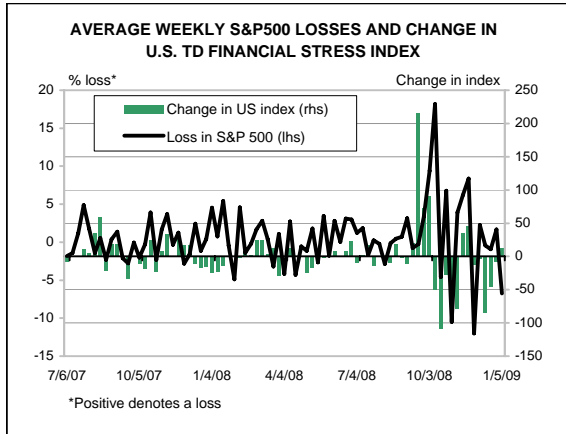
#### U.S. FINANCIAL STRESS



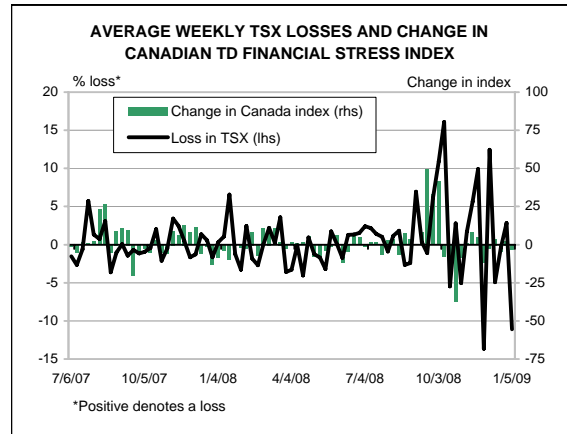
#### CANADIAN FINANCIAL STRESS



#### U.S. STOCKS AND CREDIT TIGHTNESS



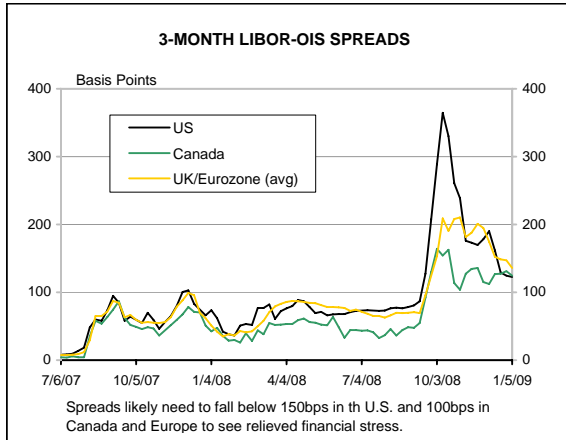
#### CANADIAN STOCKS AND CREDIT TIGHTNESS



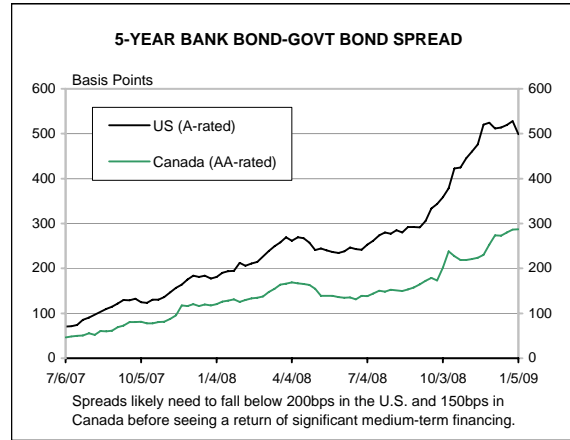
# WEEKLY INDICATORS OF FINANCIAL STRESS

## BANK FUNDING LIQUIDITY

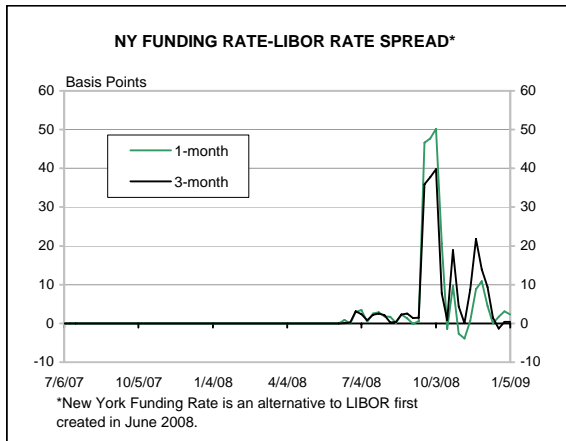
### SHORT-TERM



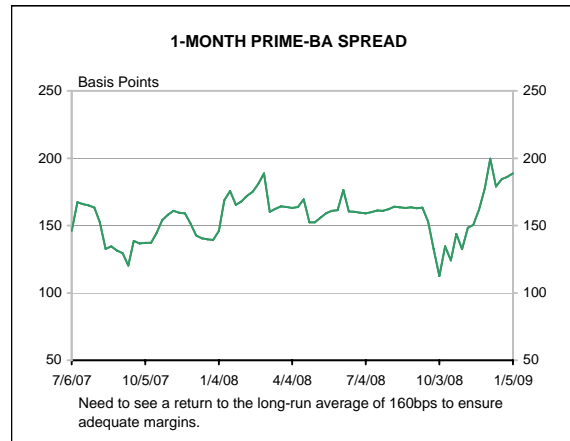
### MEDIUM-TERM



### PRESSURE ON U.S. LIBOR RATES

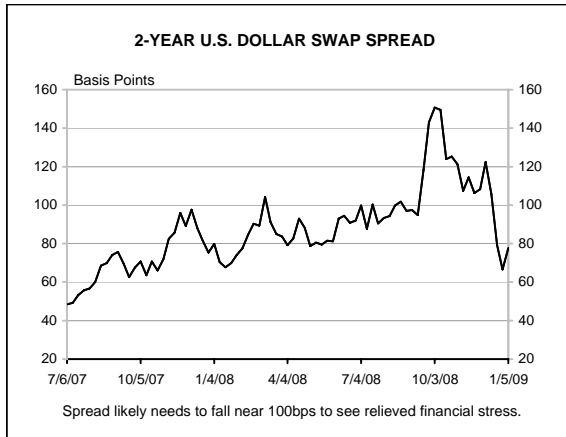


### CANADIAN VARIABLE RATE MARGINS



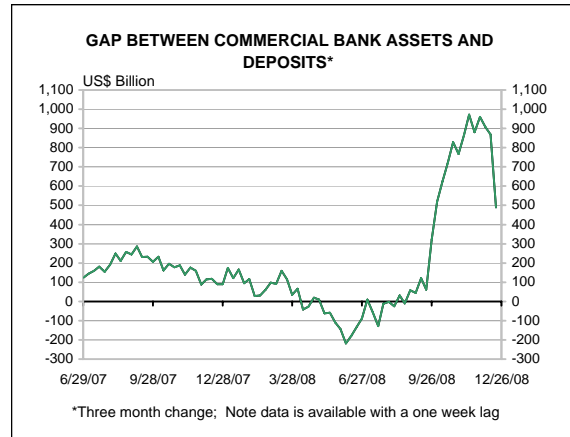
## MARKET LIQUIDITY

### COST OF HEDGING INTEREST RATE RISK



## FUNDING NEEDS

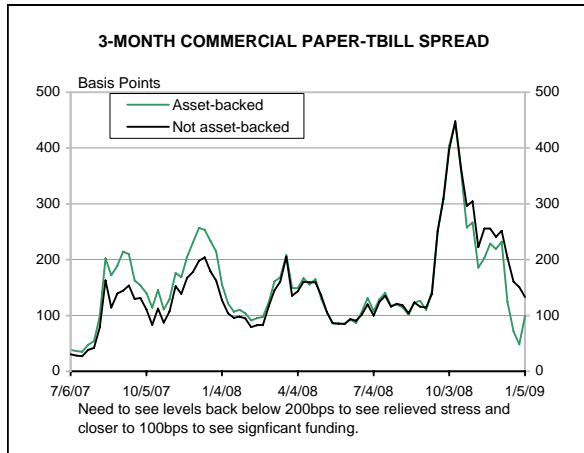
### U.S. COMMERCIAL BANK BORROWING NEEDS



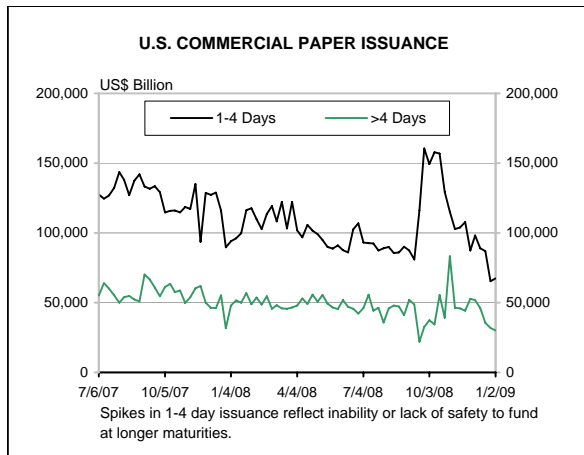
# WEEKLY INDICATORS OF FINANCIAL STRESS

## U.S. COMMERCIAL PAPER

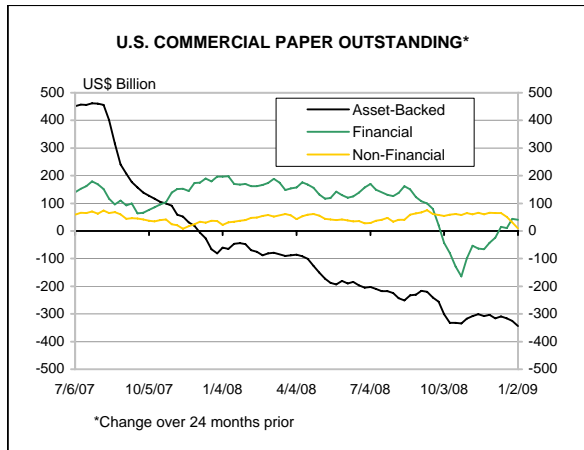
### INTEREST RATES



### NEW ISSUANCE BY MATURITY

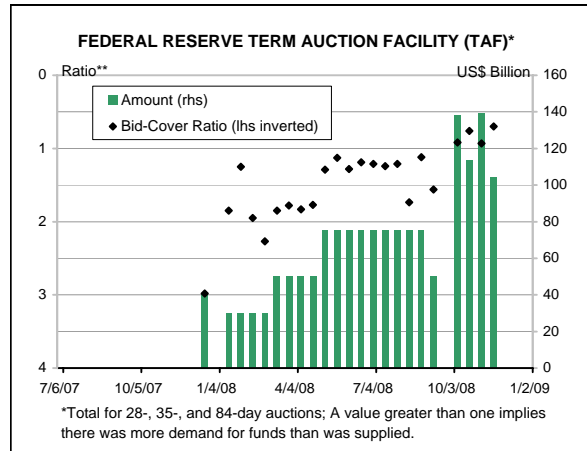


### CUMULATIVE CHANGE BY TYPE

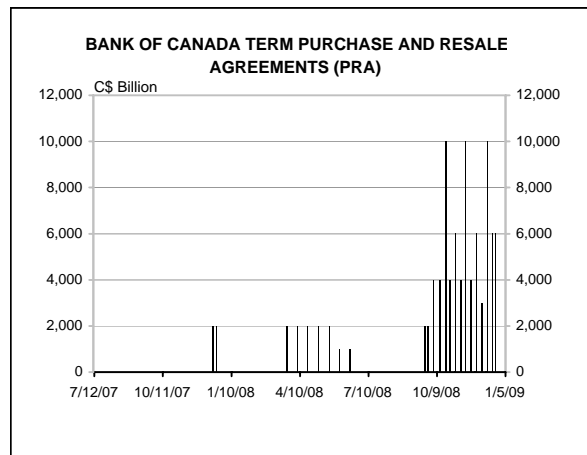


## CENTRAL BANK LIQUIDITY

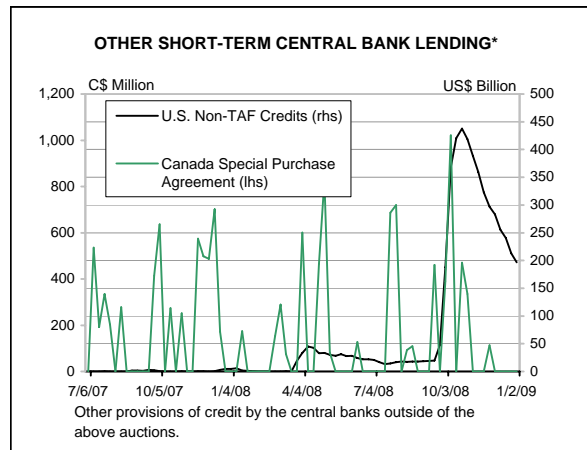
### U.S. AUCTIONS



### CANADIAN AUCTIONS



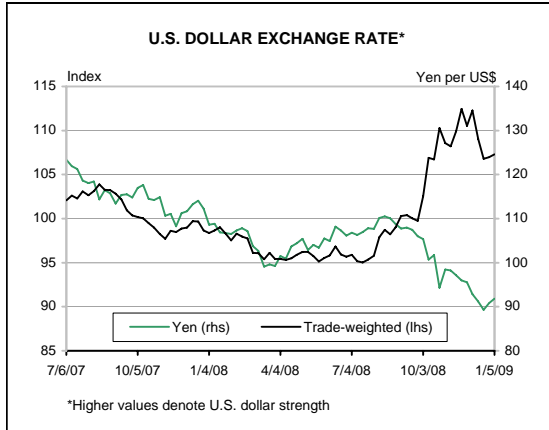
### DISCOUNT WINDOWS AND OTHER LIQUIDITY



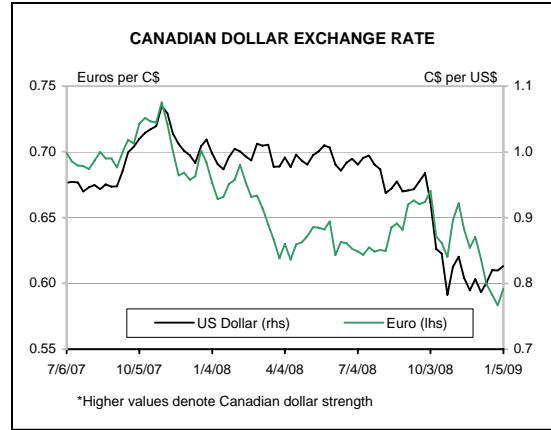
# WEEKLY INDICATORS OF FINANCIAL STRESS

## CURRENCY MOVES

### U.S. DOLLAR EXCHANGE RATE



### CANADIAN DOLLAR EXCHANGE RATE



Source: Federal Reserve, Bank of Canada, Haver Analytics, Bloomberg.  
Last updated on: 1/5/2009 10:51

TD ECONOMICS

# WEEKLY INDICATORS OF FINANCIAL STRESS

## GLOSSARY

**LIBOR-OIS SPREAD:** This spread is a measure of the funding costs between banks. LIBOR (London Inter-Bank Offer Rate) is the posted interest rate at which banks borrow from each other, typically at short-term maturities of as little as one day. Inter-bank borrowing is aimed at managing cash levels (as opposed to borrowing to fund expansion which tends to be done with long-term financing). Therefore, this rate is a reflection of liquidity stresses, or the inability or unwillingness to lend cash to others at a very short term nature. LIBOR is also the benchmark interest rate for a number of derivatives and other financial products, so it has a direct implication on borrowing costs in general. OIS (Overnight Indexed Swap) is the interest rate for a derivative which trades only the risk that interest rates might change in the near term. As such, this interest rate tends to stay relatively close to the actual level of the interest rate set by the central bank. Taking the difference between LIBOR and OIS is the premium the market is currently pricing for the risk of default (which is small in short-term loans) and the heightened premium placed on having cash (liquidity risk).

**5-YR BANK BOND-GOVT BOND SPREAD:** Bank bonds must offer a high enough yield in order to attract investors. Generally, the higher the yield, the higher the perceived risk, and therefore, the higher the yield demanded by investors to buy the debt. Since the government is seen as having much less default risk and much less liquidity risk than any given firm, government debt is taken as a proxy for the cost of "risk-free" borrowing. By taking the spread between the two, we have a measure of the extra costs by banks to raise longer-term funding. When these costs are high, firms tend to move into shorter-term financing which reduces the immediate costs, but also increases the need to seek new financing sooner when this debt matures (rollover risk). This extra demand for shorter maturity debt can also further pressure short-term interest rates like LIBOR.

**NEW YORK FUNDING RATE-LIBOR SPREAD:** The New York Funding Rate (NYFR) is an alternative to LIBOR created in June 2008. Rather than being market determined, each rate is established as the average of a survey of banks each morning. In the case of LIBOR, the question is the rate at which your own bank would be able to borrow from another bank. There has been concern in the current environment that participating banks were intentionally given low estimates due to the fear of being stigmatized. The NYFR asks for a generic response of what a similar rating institution would likely borrow at. A higher spread of the NYFR over LIBOR then could indicate increased stress in interbank lending.

**1-MONTH PRIME-BANKERS ACCEPTANCE SPREAD:** This is a measure important for Canadian financial institutions. Bankers acceptances are the short-term debt generally used to finance ongoing lending of Canadian banks, while the prime rate is the benchmark for variable interest loans offered to consumers and businesses. A narrowing spread means that the costs of funds for the banks has not changed to the same degree as changes to the prime rate. Since this margin has to compensate for the losses banks will ultimately sustain as some borrowers become delinquent or default on their loans, as well as the costs associated with making these loans, a narrowing spread has important implications for banks' ability to make future loans. A sustained narrowing can lead to the need to limit potential defaults by making safer loans.

**U.S. DOLLAR SWAP SPREAD:** Interest rate swaps are a derivative product which allows two parties to "swap" their interest rate exposure. One party typically agrees to pay a fixed interest rate to the other party over time, while the other party agrees to pay a floating interest rate, typically LIBOR, to the other. Firms use it to reduce the risk of interest payments paid on their corporate debt or reduce the mismatch in exposure to interest rate changes between their assets and liabilities, especially for those firms involved in areas such as the mortgage market where interest rate risk is most acute. This is an important indicator of financial stress due to its relationship with LIBOR, as well as the fact the spread between the swap rate and the Treasury rate of the same maturity is a good reflection of the liquidity of Treasuries in the market.

**COMMERCIAL BANK ASSET-DEPOSIT GAP:** Every Friday, the Federal Reserve publishes a consolidated balance sheet of all U.S. commercial banks. Commercial bank assets include all the loans banks extend and securities they buy. To finance these outlays, banks can rely on the deposits they hold or must try to borrow money externally. By taking the difference of total assets and deposits, then, we get a measure of the pressures on banks to finance their operations through borrowing.

# WEEKLY INDICATORS OF FINANCIAL STRESS

## GLOSSARY

**3-MONTH COMMERCIAL PAPER-TREASURY BILL SPREAD:** Commercial paper is short-term debt issued by financial as well as nonfinancial firms. It has a maturity of less than 270 days and typically less than 30 days. It is generally used to finance operations that fall in between the day-to-day liquidity needs addressed by LIBOR or the longer term operations financed in long-term debt markets. As with the bond spreads above, the government Treasury bills are seen as "risk-free" equivalents so the spread gives a measure of the extra risk seen in the debt of private companies. It is typically held by many mutual funds so the spread is a reflection of costs of financing for firms, as well as stresses in the mutual fund industry.

**COMMERCIAL PAPER ISSUANCE:** While the interest rate measures the cost of this borrowing, this measure tracks the amount of short-term debt being issued by firms. Sudden increases in issuance imply a greater need for short-term financing. Spikes at the shortest of maturities also implies increased uncertainty by investors over the prospects for the firm or economy. This increases the frequency of having to borrow new debt, and since it tends to come at times when interest rates have increased, means the total debt costs have risen as well.

**COMMERCIAL PAPER OUTSTANDING:** Measures the cumulative change in commercial paper by type over the last 24 months. This can be a reflection of an inability to find buyers for this form of financing as well as ongoing deleveraging.

**TERM AUCTION FACILITY:** The TAF was a liquidity facility introduced by the Federal Reserve in December 2007. Deposit-taking financial institutions participate in an auction with the winners paying an interest rate determined in the auction in return for receiving cash for the specified period (28-day and 84-day auctions are currently available). To guarantee repayment, the financial institution must also put up financial instruments of equal value in collateral, in effect allowing banks to swap a less liquid asset for something more liquid. The bid-cover ratio is a measure of demand for these funds, dividing the total amount demanded by the total amount supplied. As such, a value of one means demand matches supply, while a value greater than one implies there was more demand from banks for these funds than were provided by the central bank.

**TERM PURCHASE AND RESALE AGREEMENT:** The TAF is the liquidity facility provided by the Bank of Canada for Canadian commercial banks similar to the TAF details above.

A select number of these indicators are available from TD Economics on a daily basis from:  
[http://www.td.com/economics/comment/daily\\_fin.pdf](http://www.td.com/economics/comment/daily_fin.pdf)

### Bloomberg Tickers

US LIBOR:	US0003M Index	US OIS:	USSOC Curncy	US Tbill:	USGG3M Index
Canada LIBOR:	CD4803M Index	Canada OIS:	CDSOC Curncy	NY Funding Rate:	NYFR1M Curncy
UK LIBOR:	BP0003M Index	UK OIS:	BPSOC Curncy	2-yr Swap Spread:	USSP2 Curncy
Euro LIBOR:	EU0003M Index	Euro OIS:	EUSOC Curncy	US A1+ ABCP:	ACPA090Y Index
US 5-yr Bank Debt:	C0705Y Index	US 5-yr Treasury	USGG5YR Index	US A1/P1/F1 CP:	DCPB090D Index
Canada 5-yr Bank Debt:	C3065Y Index	Canada 5-yr Govt	GCAN5YR Index	BoC Term PRAs:	BCMOTREP Curncy
Canada Prime Rate	PRIMCAN Index	Canada BA	CDOR01 Curncy		
Bloomberg tickers not available					
US Commercial Bank Assets and Deposits, US CP Issues, US CP Outstanding, TAF Auctions,					

Source: Bloomberg and TD Economics

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