Central banks’ response to Covid-19 in advanced economies: online appendix

This online appendix provides further details on the monetary policy measures announced by the Bank of Canada, the ECB, the Bank of Japan, the Bank of England and the Federal Reserve, and describes the assumptions underlying the projections in Graphs 2 and 3 in the Bulletin.

### Balance sheet projections

<table>
<thead>
<tr>
<th>Central bank</th>
<th>Main assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bank of Canada</strong></td>
<td>• End-of-year amount of outstanding repos is C$150bn.</td>
</tr>
<tr>
<td></td>
<td>• End-of-year holding of Treasury bills is 20–40% of outstanding amount (C$183bn); and that of Government of Canada Bonds (GCBs) is 25–35% of outstanding amount (C$734bn).</td>
</tr>
<tr>
<td></td>
<td>• End-of-year holding of mortgage bonds is 10% of GCB purchases; that of provincial bonds is C$50bn; of corporate bonds, C$10bn; of Bankers’ Acceptances, C$50bn; and of commercial paper, C$0bn.</td>
</tr>
<tr>
<td><strong>Bank of England</strong></td>
<td>• End-of-year outstanding TFS and TFSME loans are 5–15% of outstanding financial institutions’ loans to private sector (£2.4tn).</td>
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<tr>
<td></td>
<td>• End-of-year holding of commercial paper is 30–70% of estimated eligible issuance (£54bn).</td>
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<tr>
<td></td>
<td>• APF purchases are £200bn (80%-90% of which are public sector assets).</td>
</tr>
<tr>
<td><strong>Bank of Japan</strong></td>
<td>• End-of-year outstanding SOCF loans are 60–80% of total collateral (£25tn); and outstanding SOSME loans are 30–70% of total collateral (£30tn).</td>
</tr>
<tr>
<td></td>
<td>• End-of-year holding of JGBs is 50–55% of outstanding amount (£1,038tn); that of commercial paper is ¥9.5tn; of corporate bonds, ¥10.5tn; of ETFs, ¥12tn; and of J-REITs (real estate investment trusts), ¥180bn.</td>
</tr>
<tr>
<td><strong>Eurosystem</strong></td>
<td>• End-of-year outstanding TLTRO III loans are 40–60% of maximum available amount (£2.9tn); and outstanding LTROs loans are €0bn.</td>
</tr>
<tr>
<td></td>
<td>• Total APP purchases (over the whole year) are £240bn + £120bn; and total PEPP purchases are €900bn–€1.1tn until the end of the year (70%-90% of which are public sector assets).</td>
</tr>
<tr>
<td><strong>US Federal Reserve System</strong></td>
<td>• End-of-year holding of Treasuries is 22–27% of outstanding amount ($20.6tn); and that of commercial paper is 0–20% of outstanding amount ($1.1tn).</td>
</tr>
<tr>
<td></td>
<td>• MBS purchases are 25% of Treasuries purchases.</td>
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<tr>
<td></td>
<td>• End-of-year utilisation of TALF, MSLP, PPPLF, PMCCF, SMCCF and MLF = 30–70% of announced size.</td>
</tr>
<tr>
<td></td>
<td>• End-of-year utilisation of PDCF and MMLF is 0% of announced size.</td>
</tr>
</tbody>
</table>

For all central banks, we assume that maturing assets are fully reinvested and that all other items in their balance sheets return to their pre-crisis levels by the end of the year. Flows are distributed geometrically across weeks.

### Foreign exchange measures

<table>
<thead>
<tr>
<th>Central bank</th>
<th>Programme name</th>
<th>Acronym</th>
<th>First announcement</th>
<th>End date</th>
<th>Counterparties</th>
<th>Size</th>
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</thead>
<tbody>
<tr>
<td><strong>Bank of Japan</strong></td>
<td>YEN swap line</td>
<td>YEN SL</td>
<td>31 Mar 2020</td>
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<td>TH</td>
<td>¥800bn</td>
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<tr>
<td><strong>Eurosystem</strong></td>
<td>EUR swap line</td>
<td>EUR SL1</td>
<td>20 Mar 2020</td>
<td>31 Dec 2020</td>
<td>DK</td>
<td>€24bn</td>
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<td>EUR swap line</td>
<td>EUR SL2</td>
<td>15 Apr 2020</td>
<td></td>
<td>BG, HR</td>
<td>€2bn</td>
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<tr>
<td></td>
<td>USD swap line</td>
<td>USD SL2</td>
<td>19 Mar 2020</td>
<td>30 Sep 2020</td>
<td>AU, BR, DK, KR, MX, NO, NZ, SG, SE</td>
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</tr>
<tr>
<td></td>
<td>USD repo facility</td>
<td>FIMA RF</td>
<td>31 Mar 2020</td>
<td>30 Sep 2020</td>
<td>FIMA account holders</td>
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Source: Central bank websites.
<table>
<thead>
<tr>
<th>Central bank</th>
<th>Programme name</th>
<th>Acronym</th>
<th>First announcement</th>
<th>Counterparties</th>
<th>Matu-nty</th>
<th>Size</th>
<th>Fiscal backing</th>
<th>Link to lending</th>
<th>Changes if active pre-crisis</th>
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</thead>
<tbody>
<tr>
<td>Bank of Canada</td>
<td>Term Repo operations</td>
<td>TROs</td>
<td>12 Mar</td>
<td>Primary dealers</td>
<td>S, L</td>
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<td></td>
<td>Standing Term Liquidity Facility</td>
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<td>19 Mar</td>
<td>Fin'l institutions</td>
<td>S</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Contingent Term Repo Facility</td>
<td>CTRF</td>
<td>20 Mar</td>
<td>Eligible c'parties</td>
<td>S</td>
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<td>Bank of England</td>
<td>Term Funding Scheme with additional incentives for SMEs</td>
<td>TFSME</td>
<td>11 Mar</td>
<td>Banks</td>
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<td></td>
<td></td>
<td></td>
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<td>Contingent Term Repo Facility</td>
<td>CTRF</td>
<td>24 Mar</td>
<td>Banks</td>
<td>S</td>
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<td>Full allot.</td>
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<td>Government</td>
<td>S</td>
<td></td>
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<tr>
<td>Bank of Japan</td>
<td>Funds-supplying and repo operations</td>
<td>FSOS-ROs</td>
<td>13 Mar</td>
<td>Fin'l institutions</td>
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<td>Securities Lending Facility</td>
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<tr>
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<td>Special Funds-Supplying Operations to Facilitate Corporate Financing</td>
<td>SOCF</td>
<td>16 Mar</td>
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<td>New Fund-Provisioning Measure to Support Financing Mainly of SMEs</td>
<td>SOSME</td>
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<td>Pandemic Emergency Longer-Term Refinancing Operations</td>
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<td>Banks</td>
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<td>Discount window</td>
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<td>Money Market Mutual Fund Liquidity Facility</td>
<td>MMF</td>
<td>18 Mar</td>
<td>Depository inst's</td>
<td>S</td>
<td></td>
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<td>Term Asset-Backed Securities Loan Facility</td>
<td>TALF</td>
<td>23 Mar</td>
<td>Companies with collateral</td>
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<td>Main Street Lending Program</td>
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<td>Paycheck Protection Program Liquidity Facility</td>
<td>PPPLF</td>
<td>06 Apr</td>
<td>PPP loan issuers</td>
<td>L</td>
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</table>

1 S = maturity of less than 12 months; L = maturity of 12 months or more. 2 Size of eligible collateral (for TLTO III, the number refers to the change from its pre-crisis level).

Source: Central bank websites.
<table>
<thead>
<tr>
<th>Central bank</th>
<th>Programme name</th>
<th>Acronym</th>
<th>First announcement</th>
<th>Matuity</th>
<th>Size</th>
<th>Fiscal backing</th>
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<td>BAPF</td>
<td>13 Mar</td>
<td>S</td>
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<td>16 Mar</td>
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<td>C$0.5bn/wk</td>
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<td>Bank of Canada</td>
<td>Provincial Money Market Purchase</td>
<td>PMMP</td>
<td>24 Mar</td>
<td>S</td>
<td>max 40% offerings</td>
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<td>Government of Canada Securities Purchases</td>
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<td>C$5bn/wk</td>
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<td>Commercial Paper Purchase Program</td>
<td>CPPP</td>
<td>27 Mar</td>
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<td>Bank of Canada</td>
<td>Treasury purchases</td>
<td>TPs</td>
<td>15 Apr</td>
<td>S</td>
<td>max 40% offerings</td>
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<td>Covid Corporate Financing Facility</td>
<td>CCF</td>
<td>17 Mar</td>
<td>S</td>
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<td>Bank of England</td>
<td>Asset Purchase Facility</td>
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<td>19 Mar</td>
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<td>Bank of Japan</td>
<td>CP and corporate bond purchases</td>
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<td>S</td>
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<td>Bank of Japan</td>
<td>ETFs and J-REITs purchases</td>
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<td>APP</td>
<td>12 Mar</td>
<td>L</td>
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<tr>
<td>US Federal Reserve System3</td>
<td>System Open Market Account holdings</td>
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<td>US Federal Reserve System3</td>
<td>Commercial Paper Funding Facility</td>
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<td>S</td>
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<td>US Federal Reserve System3</td>
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<td>23 Mar</td>
<td>L</td>
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<td>US Federal Reserve System3</td>
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<td>US Federal Reserve System3</td>
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<td>S</td>
<td>$500bn</td>
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</tbody>
</table>

1 S = maturity of less than 12 months; L = maturity of 12 months or more. 2 On 12 March 2020, the Bank of Canada modified its Bond Buyback Program by increasing its size and the maturity of the purchases. The CMBP replaces these changes. 3 On 12 March 2020, the Fed increased the maturity of its reserve management purchases to match the maturity composition of Treasury securities outstanding.

Source: Central bank websites.