

## Money Markets Liaison Group Contingency Matrix

System	Event	Response	Decision taking responsibilities
<b>BANK OF ENGLAND - 1</b>	Failure of Bank's Prime RTGS site.	<p>Fallback to standby site</p> <p>CREST settlement would be suspended during fallback. This may lead to timetable extensions and potentially a decision with the Bank to go into recycling mode if the fallback takes longer than expected.</p>	<p>Bank decision to invoke fallback to secondary site. Bank of England RTGS Operations inform CHAPSCo and CRESTCo.</p> <p>CHAPS operations advise CHAPS settlement members.</p>
<b>BANK OF ENGLAND - 2</b>	Failure of both Prime and Standby RTGS sites or serious application error disabling RTGS.	<p>Possible use of contingency database (which holds information on balances on settlement/reserve accounts) for a period to make critical payments<sup>1</sup>.</p> <p>If no likelihood of recovery intraday, RTGS By-pass Mode (ie a move to multilateral end of day net settlement) invoked for CHAPS £. Limited payments to/from reserve accounts.</p> <p>Extension to end of day Cut-off may be required to complete all payments and settle all clearing and settlement systems. (see below, # CHAPS - 1).</p> <p>CREST settlement would be suspended. CREST would probably go into re-cycling mode in agreement with the Bank. Possible timetable extensions.</p>	<p>Decision to close CHAPS formally rests with CHAPSCo.</p> <p>Decision to suspend RTGS settlement formally rests with the Bank. In practice either would be joint decision</p> <p>Joint Bank and CHAPSCo decision to invoke RTGS By-pass Mode contingency.</p> <p>Once in By-pass Mode, management of operational issues switches to CHAPSCo/CHAPS Settlement Members.</p> <p>Bank acts as settlement agent for multilateral (single obligation) net flows.</p> <p>Bank acts on behalf of CLS and the CHAPS participants to make real time CLS payments outside of By-pass mode.</p>
<b>BANK OF ENGLAND - 3</b>	Major operational disruption or other dislocation of sterling money market	Bank would be able to supply additional reserves to the market through regular or exceptional open market operations or its standing lending facility.	Bank decides terms on its standing facilities, reserve accounts and open market operations.

<sup>1</sup> Critical payments could include those related to CLS, settlement in other payment/settlement system and clearing houses, and large payments related to corporate events.

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		<p>Bank would be able to raise reserve targets and/or widen the range around them in order to absorb additional reserves, maintaining market interest rates in line with the official Bank rate.</p> <p>If money markets were effectively closed, the Bank would be able to narrow the spread between the standing lending and deposit facility around the official Bank rate, including to zero.</p>	<p>Bank would be able to consult MMLG.</p>
<b>BANK OF ENGLAND - 4</b>	<p>Bank cannot settle reverse repo lending because of failure of settlement systems (in the case of CREST - see also CREST 5 and CREST 6)</p>	<p>Bank can take eligible collateral in alternative systems, then settling cash leg directly in RTGS</p> <p>Bank would be able to extend eligible collateral list to include US Treasury bonds.</p> <p>Bank can use pre-positioned securities eg by settlement banks (desirable for them to hold stock liquid assets with the Bank)</p>	<p>Bank decides eligible collateral for its standing lending facility, open market operations and for intra-day liquidity in RTGS.</p> <p>Bank would be able to consult MMLG.</p>
<b>BANK OF ENGLAND - 5</b>	<p>Any sterling money market event (eg infrastructure problem; terrorist attack)</p>	<p>Bank to act as communication “clearing house” for the market.</p> <p>Bank will call MMLG members bilaterally and decide whether a conference call is needed; if so, members will be notified of the time of the call by phone and email.</p> <p>Use of tripartite website to communicate messages more widely.</p> <p>CHAPS and CREST messages could also be used.</p>	

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<b>MMLG - 1</b>	Any sterling money market event (eg infrastructure problem; terrorist attack)	MMLG used to exchange information  MMLG to consider implications for trading in light of events.	MMLG to make recommendations to wider market eg reduce non-essential trading; settlement conventions etc.  Communicated via Bank website, Bank wire services pages, tripartite website and other mechanisms eg trade associations.

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<b>CHAPS - 1</b>	CHAPS Member unable to settle payments by end of day for operational reasons	<p>CHAPS member may be able to use flexibility of reserve averaging to absorb payments shock.</p> <p>CHAPS member can use Bank of England standing facilities.</p> <p>Possible CHAPS £ Extension to End of day Cut-off (Extension).</p>	<p>CHAPS Member contacts the RT System Control to call an Extension.</p> <p>RT System Control informs CHAPSCo, (including advising whether RT can be kept open), with whom formal responsibility for granting an extension beyond 18.00 rests.</p> <p>CHAPSCo informs CHAPS Settlement Members of Extension.</p>
<b>CHAPS - 2</b>	CHAPS Member suffers serious outage, able to receive but not make payments.	<p>Affected CHAPS Member advises CHAPSCo.</p> <p>CHAPSCo advise other CHAPS Members who can then tighten or cease payments to the stricken Member to prevent further liquidity drain.</p> <p><i>In extremis</i>, 'Stricken Bank Lending Scheme'(SBLs) initiated: stricken Bank lends 'sunk' funds back to other CHAPS Members, with transfers effected by Bank.</p> <p>Alternatively Bank would be able to intermediate over its standing facilities.</p> <p>CREST settlement can continue if the affected bank has sufficient liquidity in its CREST settlement account.</p>	<p>Bank of England monitors payment flows and might be able to spot a 'sink' emerging and liaise with stricken CHAPS Member/CHAPSCo.</p> <p>CHAPS Settlement Members can activate SBLs as set out in CHAPS procedures. The primary source for this procedure is the Bank of England RTGS Reference Manual.</p>
<b>CHAPS - 3</b>	CHAPS Member insolvency (including administration, etc).	<p>CHAPS Member required to inform both CHAPSCo and the Bank straight away.</p> <p>CHAPSCo Company Manager may suspend or the Board may suspend or exclude a Member with immediate effect.</p>	<p>Bank and CHAPSCo liaise to assess impact on system.</p> <p>Decision on suspension or exclusion from CHAPS would rest with CHAPSCo Company Manager and/or Board.</p>

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		<p>Bank may decide to suspend access to RT account.</p> <p>If a CREST payment bank, CREST (in consultation with the Bank) may decide to suspend all settlement for the bank's customers while they establish new payments facilities with other payment banks.</p>	<p>Decision re suspension of an RT account would rest with the Bank.</p> <p>Retail clearings may be unable to settle or, following introduction of Liquidity Funding Agreement, the schemes, member banks and Bank of England Banking Services would be called upon to invoke contingency liquidity commitments so that settlement could complete.</p>
<b>CHAPS - 4</b>	RTGS application (software) failure.	<p>Possible use of contingency database (which holds information on balances on settlement/reserve accounts) for a period to make critical payments.</p> <p>If no likelihood of recovery intraday, RTGS By-pass Mode (ie a move to multilateral end of day net settlement) invoked for CHAPS £. Limited payments to/from reserve accounts.</p> <p>Extension to end of day Cut-off may be required to complete all payments and settle all clearing and settlement systems. (see below, # CHAPS - 1).</p> <p>CREST settlement would be suspended. CREST would probably go into re-cycling mode in agreement with the Bank. Possible timetable extensions.</p> <p>If failure occurred before settlement banks' intra-day repos with the Bank had unwound, the Bank would be able to intermediate over its standing facilities, in effect rolling overnight the intraday liquidity provided against eligible collateral and treating that as use of the standing</p>	<p>Decision to close CHAPS formally rests with CHAPSCo. Decision to suspend settlement formally rests with the Bank. In practice either would be joint decision.</p> <p>Joint Bank and CHAPSCo decision to invoke RTGS By-pass Mode contingency</p> <p>Once in By-pass Mode, management of operational issues switches to CHAPSCo/CHAPS Settlement Members.</p> <p>Bank acts as settlement agent for multilateral (single obligation) net flows.</p> <p>Bank acts on behalf of CLS and the CHAPS participants to make real time CLS payments outside of By-pass mode.</p> <p>Bank decides terms of its standing facilities, reserve accounts and open market operations.</p>

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		<p>lending facility. The Bank would also be able to narrow the interest rate corridor between its standing facilities in such circumstances, allowing 'long' banks to treat some of their balance as use of the standing deposit facility rather than holdings of reserves.</p> <p>Bank would also be able to supply additional reserves to the market through regular or exceptional open market operations and raise reserve targets and/or widen the range around them in order to absorb additional reserves.</p>	
<p><b>CHAPS - 5</b></p>	<p>'Exceptional crisis situations' (defined in CHAPS procedures as "operational disaster, civil disorder etc")</p>	<p>Possible responses are;</p> <ul style="list-style-type: none"> <li>i. Keep CHAPS open – with possible extension to end of day Cut-Off</li> <li>ii. Do not open CHAPS ,</li> <li>iii. Temporarily suspend CHAPS,</li> <li>iv. Close CHAPS early. (NB Caveat about the status of contractual obligations due on that day).</li> </ul> <p>If failure occurred before settlement banks' intra-day repos with the Bank had unwound, the Bank would be able to intermediate over its standing facilities, in effect rolling overnight the intraday liquidity provided against eligible collateral and treating that as use of the standing lending facility. The Bank would also be able to narrow the interest rate corridor between its standing facilities in such</p>	<p>Decision on an Extension formally rests with CHAPSCo, with Bank to confirm that RTGS can be kept open if needed.</p> <p>CHAPS closure for CHAPSCo. Shutting down RTGS for Bank.</p> <p>In practice either would be joint decision (and Bank and CHAPSCo would liaise closely in any event).</p> <p>Agreed payment contingency processes invoked between CLS and the Bank for CLS critical payments.</p> <p>Bank decides terms of its standing facilities, reserve accounts and open market operations.</p> <p>Bank would be able to consult MMLG.</p>

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		<p>circumstances, allowing 'long' banks to treat some of their balance as use of the standing deposit facility rather than holdings of reserves. Bank would also be able to supply additional reserves to the market through regular or exceptional open market operations and raise reserve targets and/or widen the range around them in order to absorb additional reserves</p>	
<b>CHAPS - 6</b>	SWIFT unavailable.	<p>Depending upon the extent of the unavailability of SWIFT then;</p> <ul style="list-style-type: none"> <li>i. Do not open CHAPS ,</li> <li>ii. Temporarily suspend CHAPS (potentially open late – Extend End of Day Cut-off),</li> <li>iii. Close CHAPS early. (NB Same caveat about the status of contractual obligations due on that day). If failure occurred before settlement banks' intra-day repos with the Bank had unwound, the Bank would be able to intermediate over its standing facilities, in effect rolling overnight the intraday liquidity provided against eligible collateral and treating that as use of the standing lending facility. The Bank would also be able to narrow the interest rate corridor between its standing facilities in such circumstances, allowing 'long' banks to treat some of their balance as use of the standing deposit facility rather than holdings of reserves. Bank would also be</li> </ul>	<p>CHAPS closure for CHAPSCo. Shutting down or suspension of RTGS for Bank.</p> <p>In practice either would be joint decision (and Bank and CHAPSCo would liaise closely in any event).</p> <p>Agreed payment contingency processes invoked between CLS and the Bank for CLS critical payments.</p> <p>Bank decides terms of its standing facilities, reserve accounts and open market operations.</p> <p>Bank would be able to consult MMLG.</p>

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		able to supply additional reserves to the market through regular or exceptional open market operations and raise reserve targets and/or widen the range around them in order to absorb additional reserves	

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<b>CREST - 1</b>	Loss of RTGS (DvP) or loss of communications between CREST and RTGS prior to start of day – ie prior to notification of members' start of day cash balances to CREST by the Bank.	CREST will wait for RT until 06.30. But if RTGS recovery looks unlikely, start of day balances will be provided to CREST manually via a spreadsheet. CREST will then move into 'recycle mode', in which payments between settlement banks settle net at close of business.	The decision on whether to move to recycle mode is taken jointly between the Bank and CRESTCo.
<b>CREST - 2</b>	Loss of RTGS (DvP) intra-day	CREST will immediately move into recycle mode, either using last balances or information provided manually via a spreadsheet from the Bank.	The decision on whether to move to recycle mode is taken jointly between the Bank and CRESTCo.
<b>CREST - 3</b>	Loss of CREST prime site	Fall back to standby. Potential for timetable extensions. If unsuccessful, see CREST 4.	Fallback decision taken by CREST.  Joint Bank/CREST decision to close <i>DvP</i> element of system if problem persists.
<b>CREST - 4</b>	Loss of both CREST sites	<p>If the failure occurred before the start of DvP settlement and persisted for a whole day, this would be a stable position. When CREST resumed normal processing, it would contain double the normal settlement volumes including the lost days' settlements</p> <p>If the failure occurred after the start of DvP settlement with SCR REPOs having been created with no prospect of return by 19:00, no further settlement would be possible for the day. Any SCR REPO balances would be confirmed into the outright ownership of the Bank with forward-dated deliveries to return the stock being created. When CREST resumed normal processing, it would process the outstanding settlements from</p>	<p>Joint Bank/CREST decision to close <i>DvP</i> element of system.</p> <p>Bank decides terms on its standing facilities.</p> <p>Bank would be able to consult MMLG on consequences.</p>

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		<p>the day of failure together with the new day's business.</p> <p>If failure occurred before intra-day self collateralising repos had unwound, the Bank could intermediate over its standing facilities, in effect rolling overnight the intraday liquidity provided against eligible collateral and treating that as use of the standing lending facility. The Bank would also be able to narrow the interest rate corridor between its standing facilities in such circumstances, allowing 'long' banks to treat some of their balance as use of the standing deposit facility rather than holdings of reserves.</p>	
<b>CREST - 5</b>	Serious application failure in CREST	Same as CREST -4	Same as CREST-4
<b>CREST - 6</b>	CREST Software error creates overdraft on RT account	<p>Settlement suspended while overdrawn bank asked by Bank to replenish account. If unable, Operational Error Lending Scheme initiated – other banks lend to overdrawn bank. CREST settlement resumes in recycling mode.</p> <p>Clean payments could also be frozen (at least for affected banks) to prevent long banks inadvertently paying away surplus before reimbursing overdrawn bank. But freezing period could be very short.</p>	Suspension of settlement automatic until software problem resolved. Decision on whether to invoke OELS rests with Bank.
<b>CREST - 7</b>	Settlement bank or CREST member insolvency (or any other action breaching the	Members and Settlement Banks required to notify CRESTCo immediately. CRESTCo may suspend the Member's/bank's membership or exclude	Bank and CRESTCo would liaise to assess impact on system. But decision on suspension/exclusion would rest with CRESTCo.

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	terms and conditions of membership or likely to threaten sound operation of system).	the Member/bank. Bank may decide to suspend access to RT account.  See also CHAPS-3	
<b>CREST - 8</b>	Operational problems in settlement bank or member.	No formal contingency procedures exist. Where evidence exists of underlying operational weakness, CRESTCo has the right to suspend access to CREST and the Bank to suspend access to RT account.	CREST and Bank liaise but (absent suspension or exclusion) no formal decision-making procedure.  Bank would be able to consult MMLG re market consequences.
<b>CREST - 9</b>	Operational problems in settlement bank resulting in inability to complete DBV processing within the current timetable.	Extension to "End of DBV Processing"  Corresponding general extension to CHAPS.	CRESTCo decision on extension to CREST.  Bank and CHAPSCo have agreed that corresponding extension to CHAPS would be automatic.

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<b>CLS - 1</b>	Loss of prime site	Fallback to standby. (CLS required to inform CHAPSCo as member of system)	CLS decision.  CHAPS would advise Bank and CLS members.
<b>CLS - 2</b>	Loss of both sites from an application or more likely a data corruption failure  Loss of people/ CLS UK site  Loss of both Data centres	Payment processing stops until service is resumed.  Contingency fallback to operations centre outside UK.  (Recovery capability is being developed target end 2007)	As detailed in CLS – 1.
<b>CLS - 3</b>	Failure of RTGS.	Contingency measures to allow banks to make (time-) critical payments would permit CLS pay-ins and pay-outs to take place.	Joint Bank and CLS decision to invoke CLS contingency arrangements in event of loss of RTGS.  As mentioned under CHAPS-4, RTGS failure would require a joint Bank and CHAPSCo decision to invoke RTGS By-pass Mode in CHAPS - Bank would then act on behalf of CLS and the CHAPS Members to make real time CLS payments outside of By-pass mode

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SWIFT - 1	Full SWIFT failure (either of application or of all operating sites).	<p>CHAPS cannot function normally while SWIFT is down. Depending upon the timing of the unavailability of SWIFT then;</p> <ul style="list-style-type: none"> <li>i. Do not open CHAPS at the start of day,</li> <li>ii. Temporarily suspend CHAPS until SWIFT recovers, then potential extension of day,</li> <li>iii. Close CHAPS early. (NB Same caveat about the status of contractual obligations due on that day). If failure occurred before settlement banks' intra-day repos with the Bank had unwound, the Bank would be able to intermediate over its standing facilities, in effect rolling overnight the intraday liquidity provided against eligible collateral and treating that as use of the standing lending facility. The Bank would also be able to narrow the interest rate corridor between its standing facilities in such circumstances, allowing 'long' banks to treat some of their balance as use of the standing deposit facility rather than holdings of reserves.</li> </ul> <p>CREST could continue to function (in recycling mode if RTGS closed) but SWIFT members would be unable to complete business</p> <p>SWIFT crisis management would be responsible for restoring the network.</p>	<p>SWIFT are rolling out "Cold Start" procedures articulated in the SWIFT User Manuals.</p> <p>CHAPSCo/Bank announcement re CHAPS.</p> <p>Bank would be able to consult MMLG on consequences for sterling money markets.</p> <p>Bank decides terms of its standing facilities.</p>

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		The SWIFT Crisis Co-ordination and Communications Group (SC3) will convene via teleconference. The SC3 will facilitate a coordinated flow of information about SWIFT restoration status to the industry, and act as a conduit for feeding market information to SWIFT. SWIFT users will refer to swift.com for information and guidance at operational level.	
SWIFT - 2	SWIFT regional failure	<p>SWIFT switches to alternate Operating Centre.</p> <p>SWIFT users may refer to swift.com for information and guidance at operational level.</p>	<p>SWIFT advise Bank RT Operations / CHAPSCo</p> <p>Bank RT Operations liaise with CHAPSCo.</p> <p>CHAPSCo notifies CHAPS Settlement Members.</p> <p>Bank suspends RTGS until further notice.</p> <p>Wait for SWIFT to become available</p> <p>Bank would be able to consult MMLG on consequences for sterling money markets.</p>