END2END ISO 20022 Message Flows

PAYMENTS CANADA

Last Updated: September 2017

MESSAGE FLOWS

Purpose:

- The purpose of this document is to depict the possible end-to-end payment message flows using all the messages within Payments Canada ISO 20022 portfolio.

- The message flows assume that the messages are being exchanged in accordance with the ISO AFT Rules in Rule F4.

- Message flows depicted may not occur in the same exchange cycle or in the order depicted. Use of the bank-to-corporate and corporate-to-bank messages are proprietary and are included for information purposes only.

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PAYMENTS CANADA ISO 20022 MESSAGE PORTFOLIO

Cash Management

Camt.052.001.06 – Bank to Customer Account Report

Camt.053.001.06 – Bank to Customer Statement

Camt.054.001.06 – Bank to Account Debit/Credit Notification (Debit/Credit/Mixed guidelines)

Payment Clearing & Settlement

Pacs.008.001.06 – FI to FI Customer Credit Transfer

Pacs.003.001.06 – FI to FI Customer Direct Debit

Pacs.004.001.06 – Payment Return

Pacs.007.001.06 – FI to FI Payment Reversal

Acmt.002.001.02 – Identification Modification Advice

Payment Initiation

Pain.001.001.07 – Customer Credit Transfer Initiation

Pain.002.001.07 – Customer Payment Status Report

Pain.008.001.06 – Customer Direct Debit Initiation

Pain.007.001.06 – Customer Payment Reversal

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CORPORATE TO BANK MESSAGE USAGE FOR AFT

- **Pain.001- (Credit)** –initiated by (or on behalf of) an originating corporate (or debtor) to the debtor's agent (FI) to request movement of funds from the debtor to the creditor.

- **Pain.008 (Debit)** – initiated by (or on behalf of) an originating corporate (creditor) to the creditor's agent (FI) to request collection of funds from a debtor.

- **Pain.002** – initiated by the instructed agent (FI) and sent to the previous party in the payment chain to inform them of the status of the instruction it received from that party and to provide transactional details of rejects.

- **Pain.007** – initiated by (or on behalf of) originating corporate to the next party in the chain or FI to request a reversal of a payment previously executed in accordance with established the rules.

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CLEARING MESSAGE USAGE FOR AFT

- **Pacs.008** – contains batched credit transactions exchanged between debtor agent and creditor agent to move funds from various debtors to various creditors.

- **Pacs.003** - contains batched debit transactions exchanged between creditor and debtor agent to move funds from various creditors to various debtors.

- **Pacs.007** - contains reversals of payments previously exchanged that may or may not have been processed to the customer's account.

- **Pacs.004** – contains returns of payments previously exchanged that were settled but unable to be posted in accordance with Rule F4.

- **Acmt.022** – contains notifications from an instructed agent to an instructing agent to advice of the correct account identification information.
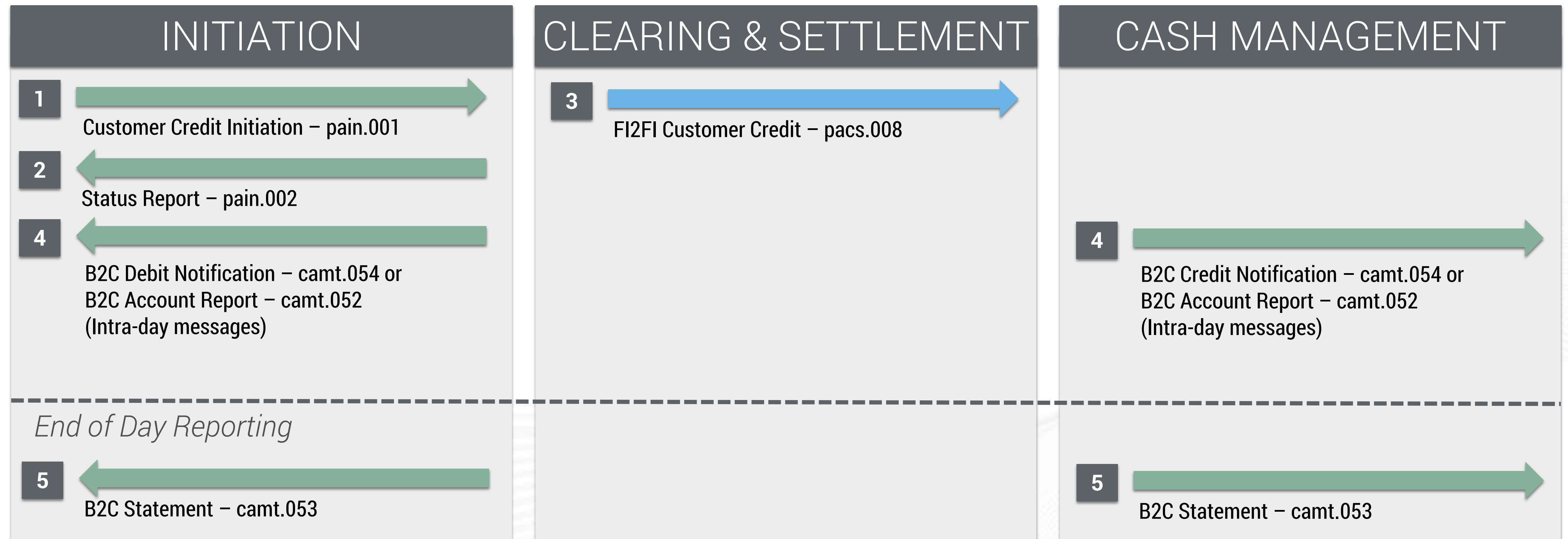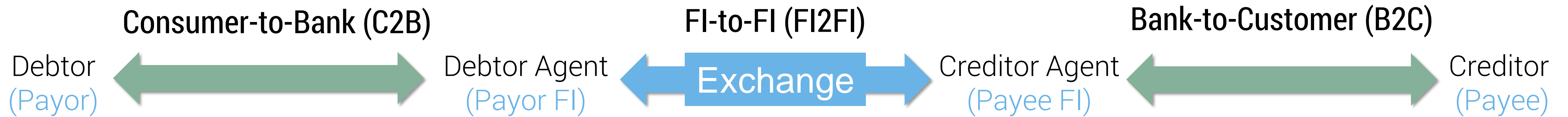
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BANK TO CORPORATE MESSAGE USAGE

- **Camt.052** – initiated by an FI to an account owner or to a party authorized by the account owner to inform of entries reported to the owner's account(s) and/or to provide balance information on these account(s) at a given point in time (i.e., bilaterally agreed intra day time intervals).

- **Camt.053** – initiated by an FI to an account owner or to a party authorized by the account owner to inform of entries booked to the account(s) and provide balance information on the account(s) at a given point in time, usually end of day (i.e., end of day/week/month/year etc. as bilaterally agreed).

- **Camt.054** – initiated by an FI to an account owner or to a party authorized by the account owner to inform of entries reported to inform the owner or authorized party of single or multiple debit and credit entries reported on the account(s).

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FLOW 1: ISO AFT CREDIT TRANSFER PAYMENT FLOW

Consumer-to-Bank (C2B)   **FI-to-FI (FI2FI)**   **Bank-to-Customer (B2C)**

Debtor (Payor) ⟷ Debtor Agent (Payor FI) ⟷ Exchange ⟷ Creditor Agent (Payee FI) ⟷ Creditor (Payee)

INITIATION	CLEARING & SETTLEMENT	CASH MANAGEMENT
1 → Customer Credit Initiation – pain.001	**3** → FI2FI Customer Credit – pacs.008	
2 ← Status Report – pain.002		
4 ⟷ B2C Debit Notification – camt.054 or B2C Account Report – camt.052 (Intra-day messages)		**4** ⟷ B2C Credit Notification – camt.054 or B2C Account Report – camt.052 (Intra-day messages)

End of Day Reporting

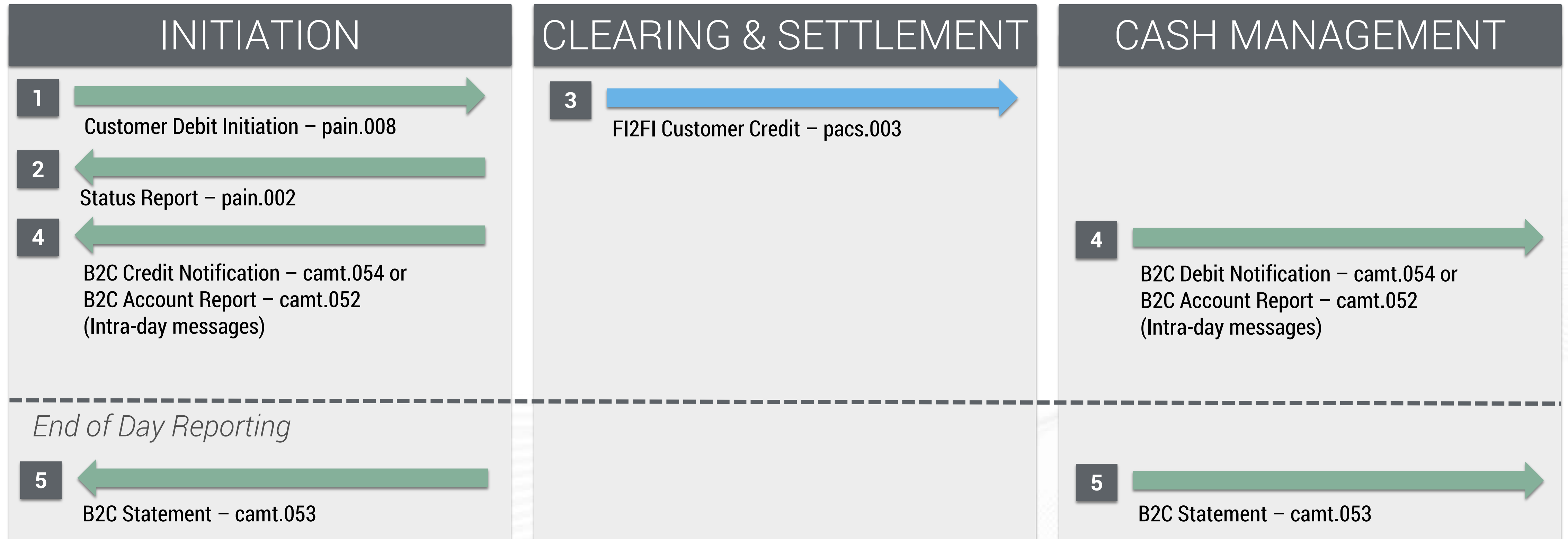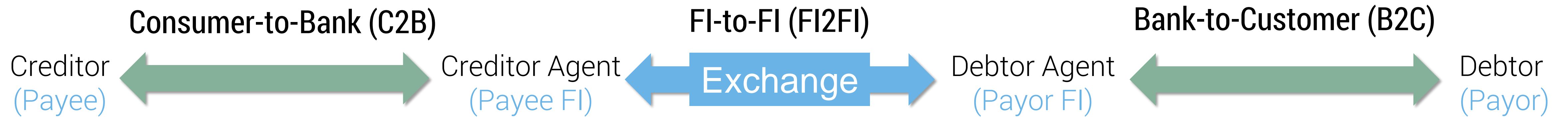|		
5 ⟷ B2C Statement – camt.053		**5** ⟷ B2C Statement – camt.053

DESCRIPTION OF FLOW 1: ISO AFT CREDIT

In accordance with bilateral agreements in place between the corporate and its financial institution the following flows of ISO messages may apply to the origination, clearing and reporting of ISO AFT payment messages:

1. A Debtor initiates a credit transfer initiation using a pain.001 message or similar proprietary message to the Debtor Agent.

2. The Debtor Agent processes the message received and may send the Debtor a Customer Payment Status Report message such as a pain.002 or similar proprietary message to acknowledge receipt of the file and provide any details of rejected transactions if necessary.

3. The Debtor Agent creates and sends a pacs.008 (containing information from the payment initiation message) to the Creditor Agent through the clearing.

4. The Creditor Agent processes the transactions and may send a camt.054 or camt.052 (as bilaterally agreed with the corporate) to advise the Creditor of the credit posted to its account.

5. At the end of the day, both agents may choose to send a Bank to Customer Statement message such as a camt.053 or similar proprietary message to their respective corporate with a complete report of the day's account activities, as bilaterally agreed.
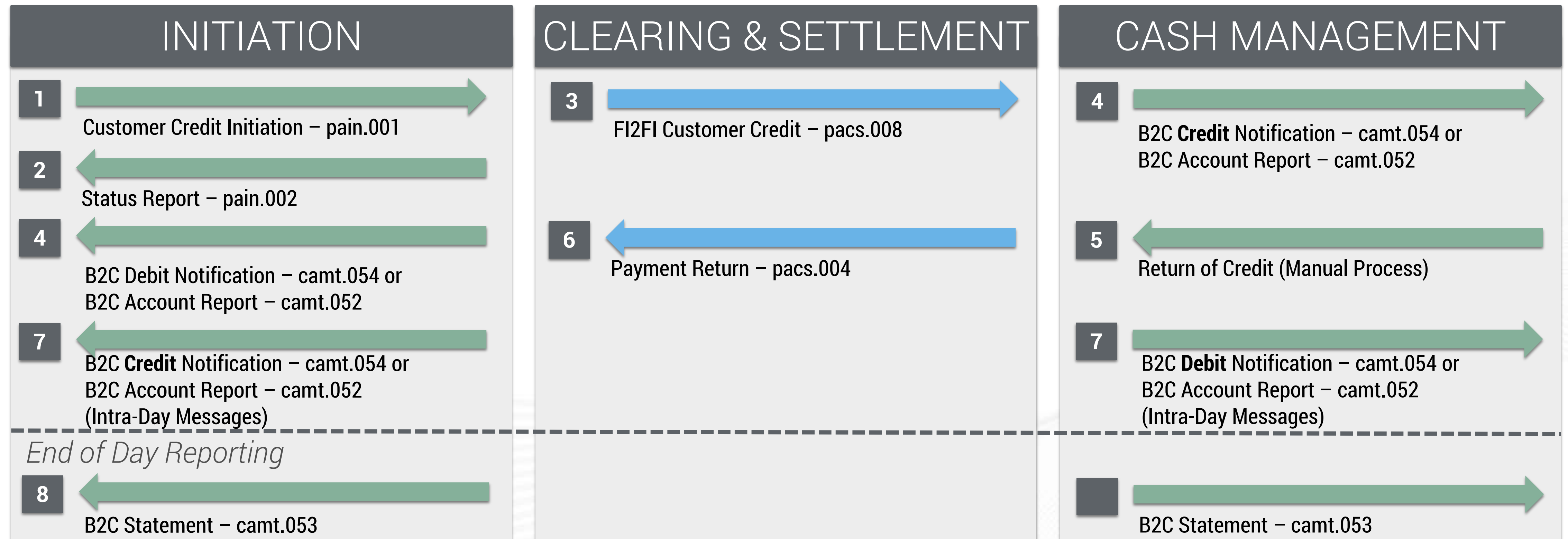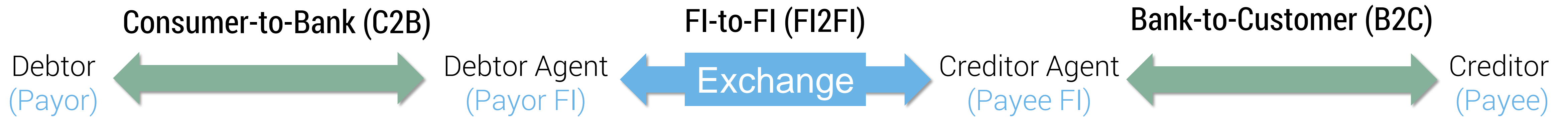
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DESCRIPTION OF FLOW 2: ISO AFT DEBIT

In accordance with bilateral agreements in place between the corporate and its financial institution the following flows of ISO messages may apply to the origination, clearing and reporting of ISO AFT payment messages.

1. A Creditor initiates a direct debit initiation using a pain.008 message or similar proprietary message to the Creditor Agent.

2. The Creditor Agent performs the validation edit and may send back a Customer Payment Status Report message using a pain.002 or similar proprietary message to acknowledge receipt of the file and provide any details of rejected transactions if necessary.

3. The Creditor Agent then creates and sends a pacs.003 (containing the information in the debit initiation message) to the Debtor Agent.

4. The Debtor Agent posts the debit to the Debtor's account and may sends a camt.054 or camt.052 (as bilaterally agreed) or similar proprietary message to advise the Debtor of the debit.

5. Meanwhile, the Creditor Agent may send a camt.054 or camt.052 (as bilaterally agreed) or similar proprietary message to advise of the credit to the Creditor's account.

6. At the end of the day, both agents may choose to send a Bank to Customer Statement message using a camt.053 or similar message to their respective corporate with a complete report of the day's account activities, as bilaterally agreed.

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FLOW 3: RETURN OF AN ISO AFT CREDIT

Consumer-to-Bank (C2B)

FI-to-FI (FI2FI)

Bank-to-Customer (B2C)

Debtor (Payor) ⟷ Debtor Agent (Payor FI) ← Exchange → Creditor Agent (Payee FI) ⟷ Creditor (Payee)

INITIATION

1 Customer Credit Initiation – pain.001

2 Status Report – pain.002

4 B2C Debit Notification – camt.054 or B2C Account Report – camt.052

7 B2C **Credit** Notification – camt.054 or B2C Account Report – camt.052 (Intra-Day Messages)

End of Day Reporting

8 B2C Statement – camt.053

CLEARING & SETTLEMENT

3 FI2FI Customer Credit – pacs.008

6 Payment Return – pacs.004

CASH MANAGEMENT

4 B2C **Credit** Notification – camt.054 or B2C Account Report – camt.052

5 Return of Credit (Manual Process)

7 B2C **Debit** Notification – camt.054 or B2C Account Report – camt.052 (Intra-Day Messages)
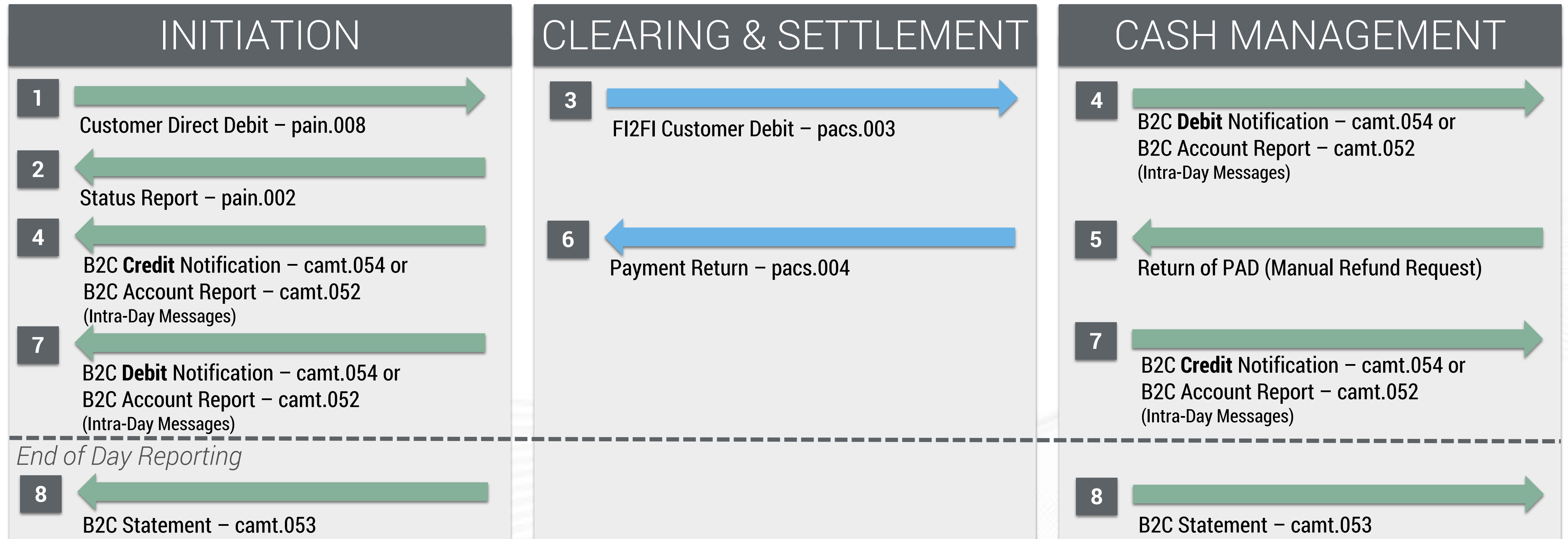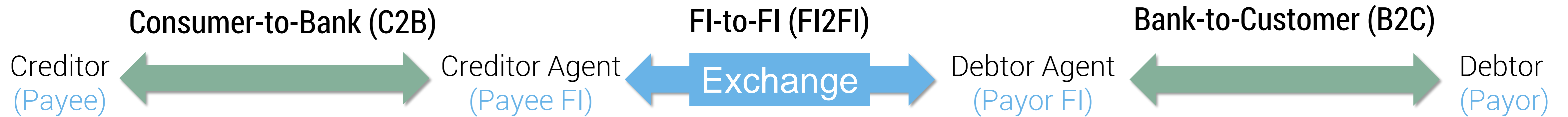
■ B2C Statement – camt.053

DESCRIPTION OF FLOW 3: RETURN OF ISO AFT CREDIT

In accordance with bilateral agreements in place between the corporate and its financial institution the following flows of ISO messages may apply to the origination, clearing and reporting of ISO AFT payment messages:

1. A Debtor initiates a credit transfer initiation using a pain.001 message or similar proprietary message to the Debtor Agent.

2. The Debtor Agent performs the validation edits and may send the Debtor a Payment Status Report using a pain.002 or similar proprietary message to acknowledge receipt of the file and provide details of rejected transactions (as necessary).

3. The Debtor Agent creates and sends a pacs.008 (containing information from the credit initiation message) to the Creditor Agent.

4. Both the Creditor and Debtor agents may choose to notify their respective clients of the corresponding debit and credits by sending a camt.054 or camt.052 (as bilaterally agreed) or similar proprietary message to advice of the credit to the receivers account and a debit to the debtors account.

5. A Request to return a credit is made by the Creditor (a manual process).

6. The Creditor will initiates a Payment Return (pacs.004) message for delivery to the Debtor Agent.

7. Both the Creditor Agent and Debtor Agent may send both corporates a camt.054 or camt.052 (as bilaterally agreed) or similar proprietary message to report on the return of the debit.

8. At the end of the day, both agents may choose to provide an end of day closing balance report using a the camt.053 or similar proprietary message.

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FLOW 4: RETURN OF AN ISO AFT DEBIT

Consumer-to-Bank (C2B)   **FI-to-FI (FI2FI)**   **Bank-to-Customer (B2C)**

Creditor (Payee) ↔ Creditor Agent (Payee FI) ↔ Exchange ↔ Debtor Agent (Payor FI) ↔ Debtor (Payor)

INITIATION

1 Customer Direct Debit – pain.008

2 Status Report – pain.002

4 B2C **Credit** Notification – camt.054 or B2C Account Report – camt.052 (Intra-Day Messages)

7 B2C **Debit** Notification – camt.054 or B2C Account Report – camt.052 (Intra-Day Messages)

End of Day Reporting

8 B2C Statement – camt.053

CLEARING & SETTLEMENT

3 FI2FI Customer Debit – pacs.003

6 Payment Return – pacs.004

CASH MANAGEMENT

4 B2C **Debit** Notification – camt.054 or B2C Account Report – camt.052 (Intra-Day Messages)

5 Return of PAD (Manual Refund Request)

7 B2C **Credit** Notification – camt.054 or B2C Account Report – camt.052 (Intra-Day Messages)
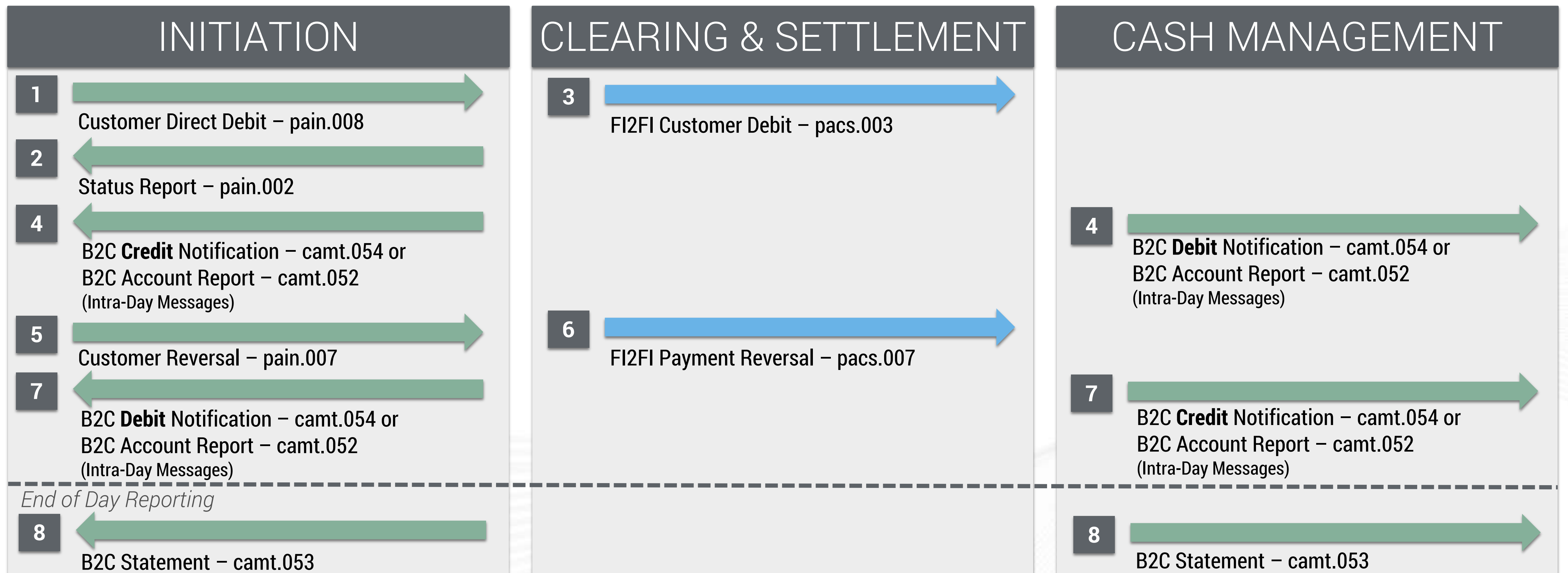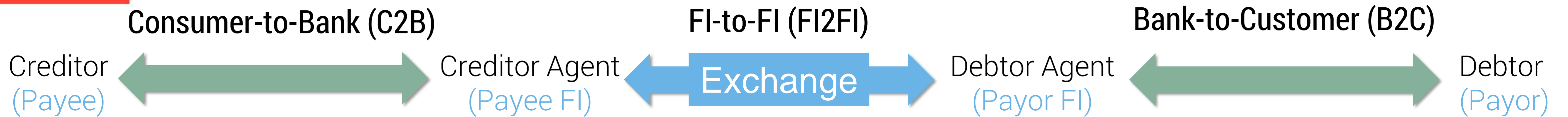
8 B2C Statement – camt.053

DESCRIPTION OF FLOW 4: RETURN OF ISO AFT DEBIT

In accordance with bilateral agreements in place between the corporate and its financial institution the following flows of ISO messages may apply to the origination, clearing and reporting of ISO AFT payment messages:

1. The Creditor initiates a debit transfer initiation using a pain.008 or similar proprietary message to the Creditor Agent.

2. The Creditor Agent performs validation edit and may report any rejected transactions back to the CREDITOR using a Payment Status Report (pain.002) or similar message.

3. The Creditor Agent then creates and sends a pacs.003 (containing the information included in the Debit transfer message - pain.008 or similar proprietary message to the Debtor Agent.

4. The Debtor Agent posts the debit to the Debtor's account and may send a camt.054 or camt.052 (as bilaterally agreed) or similar proprietary message to advise of the debit . The Creditor Agent may also send a camt.054 or 052 or similar proprietary message to the Creditor to notify of the credit.

5. The PAD is returned in accordance with the PAD Rules, by the Debtor.

6. The Debtor Agent initiates a return by sending a pacs.004 to the Creditor Agent.

7. Both Agents may appropriately notify their respective customers of 1) the debit being returned and 2) the resulting credit back to the original debtor's account using camt.054 or camt.052 or similar proprietary message

8. At the end of the day, both agents may choose to provide an end of day closing balance report using a the camt.053 or similar proprietary message.
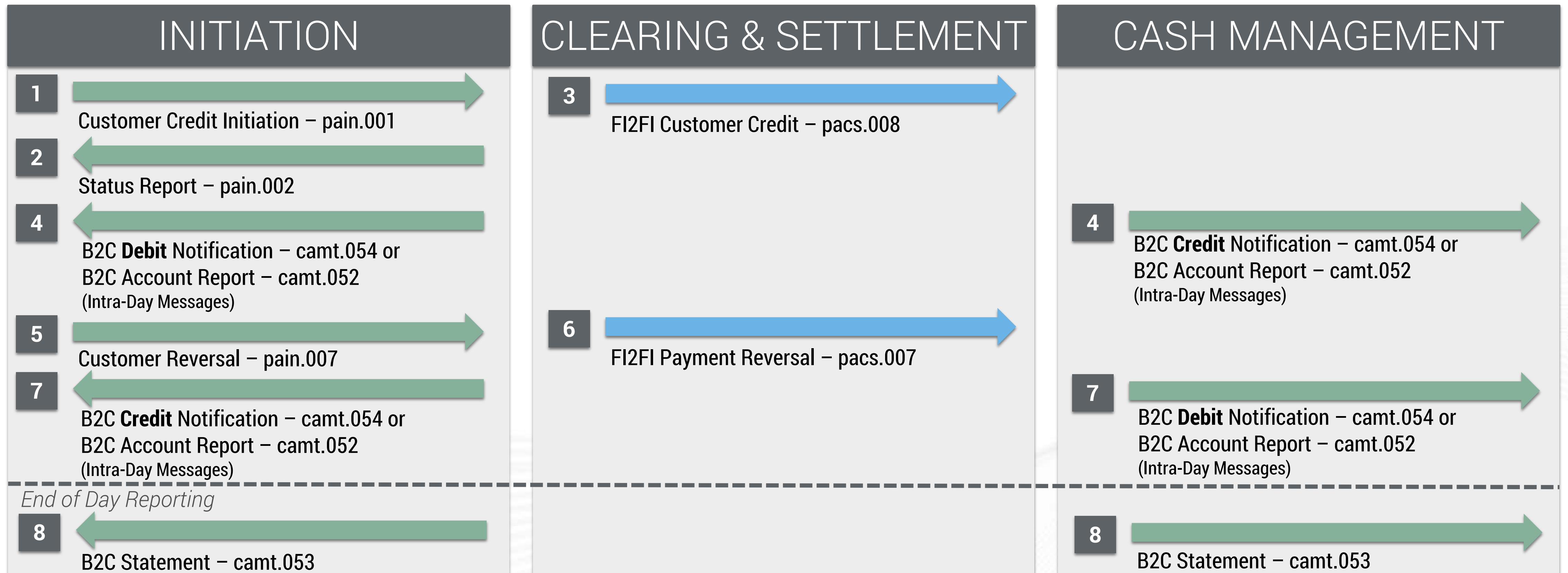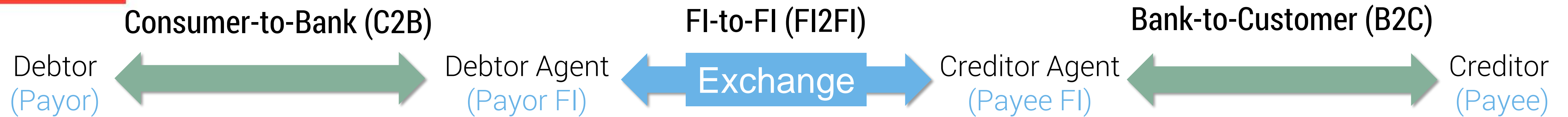
DESCRIPTION OF FLOW 5: REVERSAL OF AN ISO AFT DEBIT

In accordance with bilateral agreements in place between the corporate and its financial institution, the following flows of ISO messages may apply to the origination, clearing and reporting of ISO AFT payment messages:

1. The Creditor initiates a debit transfer initiation using a pain.008 or similar proprietary message to the Creditor Agent.

2. The Creditor Agent performs validation edit and may report any rejected transactions back to the CREDITOR by way of another Payment Status Report such as or similar to a pain.002 message.

3. The Creditor Agent then creates and sends a pacs.003 (containing the information included in the customer direct debit message to the Debtor Agent.

4. The Debtor Agent posts the debit to the Debtor's account and may notify the Debtor of the debit by way of a camt.054 or camt.052 (as bilaterally agreed) or similar proprietary message. The Creditor Agent may also send a camt.054 or 052 or similar proprietary message to the Creditor to notify of the credit.

5. In the event that the Creditor realises that it had made an error in a transaction (e.g., duplication of debit transaction) it may initiate a pain.007 to reverse that transaction.

6. The Creditor Agent initiates a reversal by sending a pacs.007 to the Debtor Agent.

7. Both Agents shall appropriately notify their respective customers of 1) the debit being returned and 2) the resulting credit back to the original debtor's account by using a camt.052 or camt.0.54 or similar proprietary message.

8. At the end of the day, both agents may choose to provide an end of day closing balance report using a the camt.053 or similar proprietary message.

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FLOW 6: REVERSAL OF AN ISO AFT CREDIT

Consumer-to-Bank (C2B)   **FI-to-FI (FI2FI)**   **Bank-to-Customer (B2C)**

Debtor (Payor) ←→ Debtor Agent (Payor FI) ←→ Exchange ←→ Creditor Agent (Payee FI) ←→ Creditor (Payee)

INITIATION

1 → Customer Credit Initiation – pain.001

2 ← Status Report – pain.002

4 ← B2C **Debit** Notification – camt.054 or B2C Account Report – camt.052 (Intra-Day Messages)

5 → Customer Reversal – pain.007

7 ← B2C **Credit** Notification – camt.054 or B2C Account Report – camt.052 (Intra-Day Messages)

End of Day Reporting

8 ← B2C Statement – camt.053

CLEARING & SETTLEMENT

3 → FI2FI Customer Credit – pacs.008

6 → FI2FI Payment Reversal – pacs.007

CASH MANAGEMENT

4 ←→ B2C **Credit** Notification – camt.054 or B2C Account Report – camt.052 (Intra-Day Messages)

7 ←→ B2C **Debit** Notification – camt.054 or B2C Account Report – camt.052 (Intra-Day Messages)
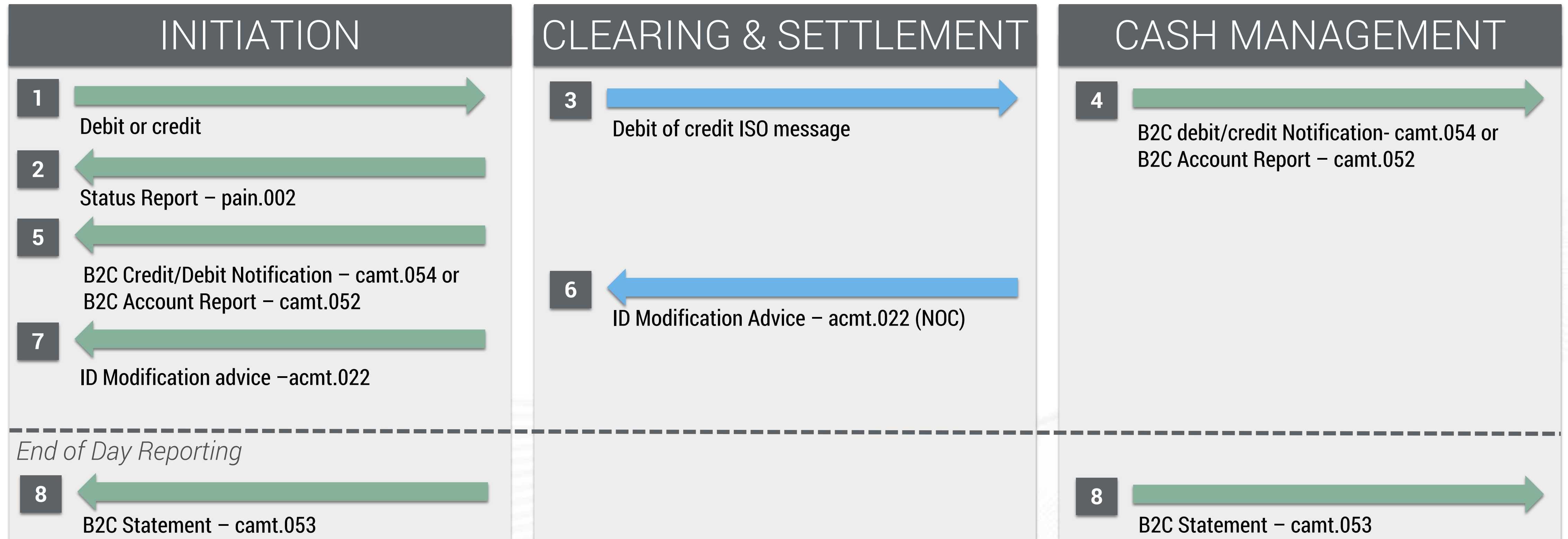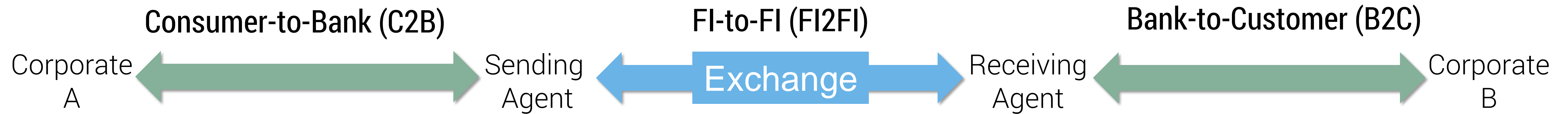
8 ←→ B2C Statement – camt.053

DESCRIPTION OF FLOW 6: REVERSAL OF ISO AFT CREDIT

In accordance with bilateral agreements in place between the corporate and its financial institution the following flows of ISO messages may apply to the origination, clearing and reporting of ISO AFT payment messages:

1. The Debtor initiates a credit transfer initiation using a pain.001 or similar proprietary message to the Debtor Agent.

2. The Debtor Agent shall then perform validation edit and may report any rejected transactions to the Debtor by using a Payment Status Report such as a pain.002 or similar proprietary message.

3. The Debtor Agent shall then create and send a pacs.008 (containing the information included in the credit initiation message) to the Creditor Agent.

4. The Creditor Agent shall post the credit to the Creditor's account and may send a camt.054 or camt.052 (as bilaterally agreed) or similar proprietary message to advise of the credit. Similarly, the Debtor Agent may also send a camt.054 or 052 to the Debtor to notify of the debit.

5. In the event that the Debtor realizes that it had made an error in a transaction it may issue a pain.007 to the Debtor Agent to reverse that transaction in accordance with the Rules.

6. The Debtor Agent shall initiate a reversal by sending a pacs.007 to the Creditor Agent.

7. Both Agents shall appropriately notify their respective customers of 1) the debit being returned and 2) the resulting credit back to the original debtor's account by using a camt.054 or camt.052 (depending on bilateral agreements) or similar proprietary message.

8. At the end of the day, both agents may choose to provide an end of day closing balance report using a the camt.053 or similar proprietary message.

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FLOW 7: IDENTIFICATION MODIFICATION ADVICE

Consumer-to-Bank (C2B)   **FI-to-FI (FI2FI)**   **Bank-to-Customer (B2C)**

Corporate A ⟷ Sending Agent ⟷ Exchange ⟷ Receiving Agent ⟷ Corporate B

INITIATION

1 →
Debit or credit

2 ←
Status Report – pain.002

5 ←
B2C Credit/Debit Notification – camt.054 or
B2C Account Report – camt.052

7 ←
ID Modification advice – acmt.022

End of Day Reporting

8 ←
B2C Statement – camt.053

CLEARING & SETTLEMENT

3 →
Debit of credit ISO message

6 ←
ID Modification Advice – acmt.022 (NOC)

CASH MANAGEMENT

4 →
B2C debit/credit Notification- camt.054 or
B2C Account Report – camt.052

8 →
B2C Statement – camt.053

DESCRIPTION OF FLOW 7: IDENTIFICATION MODIFICATION ADVICE

In accordance with bilateral agreements in place between the corporate and its financial institution the following flows of ISO messages may apply to the origination, clearing and reporting of ISO AFT payment messages:

1. Corporate A initiates a (debt of credit) transfer using an ISO 20022 or similar proprietary message to the its Agent (Sending Agent).

2. The Sending Agent shall then perform validation edits and may send a Customer Payment Status Report such as or similar to the pain.002 to Corporate A to notify of any rejected transactions.

3. The Sending Agent shall then create the clearing message containing information included in the initiation message to the Receiving Agent.

4. The Receiving Agent shall post the credit to the Creditor's account and sends a camt.054 or camt.052 (as bilaterally agreed) to advise of the debit or credit transaction. Some manual posting will be required for transactions destined to customers who's routing information has changed.

5. The Receiving Agent shall also create an ACMT.022 message (in accordance with the Rule) and send it to the Sending Agent to advice of the change in customer payment routing information.

6. At the end of the day, both agents may choose to send a Bank to Customer Statement (camt.053) to their respective corporate with a complete report of the day's account activities, as bilaterally agreed.

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