Corporate Pensions Process Automation

Business Model. Version 5.02. 2017 Edition.
VIANOVA WORKING GROUP

LIVE FROM 18th November 2017

History

5.01 RC2	Dates.
	The following data items have had their types changed in the data model.

Data Item	Old Type	New Type
ViaNova Order Status Message-> Expected Settlement Date	DateTime	Date
ViaNova Redemption Order Confirmation-> Cash Settlement Date	DateTime	Date

A new explanation of when a 'Received OK' message needs to be sent has been added to the scenario tables on page 33.

Contents

Introduction

This document contains the standard definition of straight through processing interfaces for the corporate pensions industry in the UK. Many automation solutions have been implemented using these rules and billions of pounds of business has been successfully processed automatically using solutions based on these rules.

ViaNova defines a standard set of automatable business conversations for processing orders, prices, transactions and holdings reports in the corporate pensions industry.

The document is maintained by the UK Funds ViaNova Working Group under the auspices of the UK Securities Market Practice Group and represents agreed best practice for the UK corporate pensions industry.

Background

The corporate pensions industry has a fundamental need to operate on a low-cost basis. Straight through processing offers the chance to reduce cost, reduce risk and enhance customer service.

The launch of the ISO 20022 data dictionary and the securities trade messages in October 2004 provided the impetus for the corporate pensions industry to adopt a standard approach. The formation of the Investment Managers Straight Through Processing Development Group (IMSDG) provided a forum for the industry to discuss STP issues. It was agreed that STP should not be seen as a competitor differentiator and that it was in the industry's interest as a whole to introduce a common straight through processing platform.

In October 2007, the responsibility for maintaining this document was passed to a working group of the UK Funds market practice group and the IMSDG was wound up.

Release Note for Version 5.00

We are pleased to announce our new business rules to support the reporting of transactions within an investment account – including the ones which were not initiated by the TPA, such as fee encashment and re-balancing switches. This will allow accurate reporting of all the underlying asset movements in benchmark driven investment portfolios and represents a valuable addition to the ViaNova platform.

Refactoring of the 2017 edition

Since the original version of this document there have been changes to the way market practice documents such as this approach their objectives. We have found it useful to increasingly divide the business data model from the underlying messaging technology that we use to implement solutions.

This is known as the 'business focused' approach to market practice, it moves the emphasis away from the needs of any particular technical solution and instead concentrates on the business data items that need to be exchanged in order for automated processes to be built.

The business focused model has high level data definitions – but is not focused on any particular technical solution for delivery.
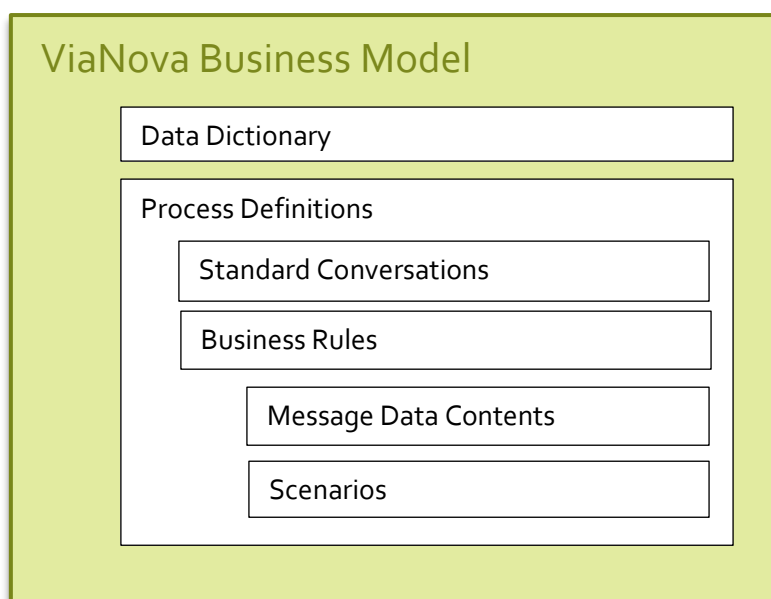
Along with the ViaNova Business Model we also define maps to enable the ViaNova business model to be implemented using standard messaging formats. The default messaging technology for ViaNova is the ISO 20022 message set delivered over the SWIFT network.

To support this new approach, we have divided the ViaNova market practice document into a Business Model document (this document) and a separate ISO 20022 mapping document.

ViaNova can be delivered over any technical solution that supports the ViaNova Business Model.

ViaNova compliance. Is it all or nothing?

We would like to reassure companies who are considering the adoption of ViaNova messaging and ViaNova market practice rules that it is not a requirement that companies implement all the messages for which market practice is defined herein. It is entirely possible to implement support for subscriptions and redemptions without building support for the switch order.

We recommend that if you decide to implement a particular order type, you should implement all the messages in that group. For example, a TPA implementing the Subscription Order should be able to process Order Status and the Subscription Order Confirmation message. Ideally they should implement the Subscription Order Cancellation Request message and the Order Cancellation Status message. The same would apply to Product Providers – they should not implement the ability to receive a Subscription Order without the ability to send the Order Status message and the Subscription Order Confirmation message. In addition, they should build support for the Subscription Order Cancellation request and the Order Cancellation Status Report message even if they cannot process cancellations via STP. We suggest that any order process that begins with an ISO 20022 message should be completed and confirmed via an ISO 20022 message.

Support

For more information on this document or to suggest changes and enhancement please contact the co-chairs of the working group:

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For latest news and minutes of ViaNova working group meetings please consult the ViaNova web site www.vianova.org.uk. This document is published on the Securities Market Practice Group web site www.smpg.info and on the ViaNova web site.

ViaNova Standard Order Routing Conversation

TPA	PRODUCT PROVIDER	COMMENTS

Order — Subscription, Redemption or Switch →

← Received OK (Optional) — Order Status

> If the order is accepted the status message contains the expected dealing date.

← Rejected — Order Status

Cancellation request →

← Accepted or rejected — Cancellation Status

← Cancelled — Order Status

← Subscription, Redemption or Switch Confirmation — Order Confirmation

> This diagram shows the full range of messages available in the standard ViaNova order processing conversation.

> If the system receiving a ViaNova order can accept or reject it automatically it is not necessary to send the 'Received OK' message. The 'Rejected' or 'Accepted' message can serve the same purpose of informing the TPA that their order has been received.
>
> If the order is not being processed automatically but has been added to a manually processing queue, then it will be necessary to send the 'Received OK' message.

ViaNova Reporting

TPA	PRODUCT PROVIDER	COMMENTS

← Price Report

← Holding Report

← Transaction Report

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Definitions

Roles

Third Party Administrators (TPA)

For the purpose of this document all types of administrators for corporate pension schemes are referred to as third party administrators. TPAs provide pension administration services for corporate pension trustees. They receive investment instructions from pension scheme trustees and then pass instructions on to one or more product providers.

Product Providers (PP)

Product providers are those institutions who provide financial instruments for corporate pension investments. They may encompass such roles as transfer agency, funds management and fund accounting.

Investment Accounts and Financial Instruments

Product providers use a variety of terms to refer to the location of assets within a pension scheme. Assets may be held by 'policies' or 'sub-policies' ,or perhaps 'portfolios' or 'products'. However comparison of the structures of accounts held by participants in this project revealed that all that was required to model the structure of investment accounts was that they should be seen as a tree structure.
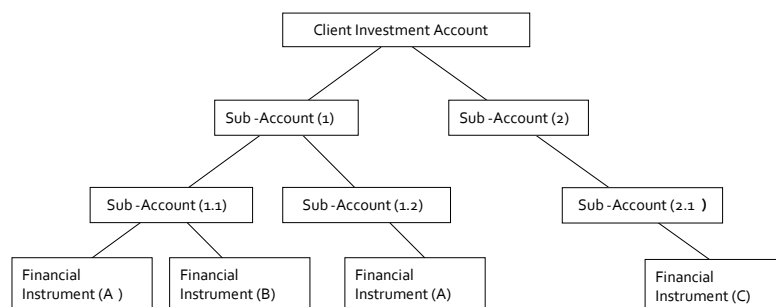
Figure 1 ViaNova Sub Account Structure

Figure 1 above shows how individual holdings in financial instruments are held within a tree structure. A sub-account identification is required to unambiguously identify the location of a holding of a particular financial instrument within an investment account.

For example, the location of Financial Instrument (A) in Sub-Account (1.1) requires a different location identification from the Financial Instrument (A) located in Sub-Account (1.2). A sub-account identification is particularly important in the case of a switch transaction. To switch an asset from Sub-Account (1.1) to Sub-Account (1.2) a sub account identifier will be required in both the redemption leg and subscription leg of the switch.

Creating an Order

Cut Off Time

The dealing point for an order is determined by the time it arrives at the product provider relative to the fund dealing cut-off time. The arrival time will be measured against the timestamp supplied by the message carrier. For example, the timestamp carried in the Swift header.

Investment Accounts and Sub Accounts

The account structure that the product providers use is often based on a tree structure. A client may have a pension scheme with both defined benefit and defined contribution sections and with each section being further split into a collection of subdivisions. It is very often the case that the same financial instrument is held on one or more of the subdivisions. To this end we make use of both the investment account and the sub-account identifiers to identify the client's holdings.

The investment account identification in the message should hold a high-level identifier and additional information should be provided to specify the target sub-account at the order level.

Order messages must only contain references to investment sub-accounts within the investment account specified in the message.

Sub-Account identifiers – check with your counterparty

Sub-Account identifiers are optional in the subscription and redemption orders. Some product providers insist on receiving a sub-account identifier, whilst others do not require them. When setting up with a new product provider or platform service it will be necessary to check whether they require a sub-account identifier to be used or not.

Product providers should not reject orders if they include sub-account identifiers, but it entirely allowable to ignore these identifiers if they are not used in their order automation process.

Fund Identification

Wherever possible financial instruments should be identified with an ISIN code. It is allowable to use a proprietary identification for the financial instrument if this is required by the product provider.

Non-Priced Financial Instruments

It is allowable to submit orders and cash into investment accounts that are not unitised. It was agreed that we would support these deals by allowing a proprietary fund identifier which would be defined by the product provider.

To maintain consistency of processing of orders for non-priced financial instruments there would be a confirmation message for a dummy fund with a unit price of 1 base currency unit e.g. one Pound Sterling.

Order Reference

The order reference must be unique across all order types from a particular sender. The order reference can be no more than 16 characters long.

Multiple Orders Per Message

Corporate pensions market practice supports the inclusion of multiple orders in both subscription and redemption order messages. The following guidelines should be discussed with your counterparty when considering grouping orders together in one message.

	Guidelines for allowing multiple order details in a redemption or subscription order.
1	Pricing point. Should all the orders be for a single pricing point?
2	Fund deadline. Should all the orders be for funds sharing the same fund deadline?
3	Currency. Should all the orders within one message be denominated in a single currency?
4	Cash settlement. Should there be a single cash settlement for subscription orders and a single point of deposit for redemptions?
5	Order denomination. Consider whether all the orders should have the same denomination e.g. all cash or all unit driven

Table 1 Guidelines for grouping multiple orders in a single message

Cash Settlement Details

Subscription orders may include bulk cash settlement details. If these are present it is mandatory that the target bank account (the creditor bank account) details should be provided. The source bank details are optional.

Redemption orders include bulk cash settlement details. This element may contain the details of the account to which the TPA would like the redemption proceeds paid and proposed cash settlement reference.

Bank Account Identification

Whenever possible, bank accounts must be identified by IBAN[1] and banks must be identified with the BIC code[2].

Bulk Cash Settlement

Third party administrators and product providers will support bulk cash settlements. This means that for any particular dealing date they may send many individual orders which would be settled by a single bulk cash payment. Each order would include details of the bulk cash settlement. The TPA will be able to indicate which orders are covered by the bulk payment by the use of a single credit transfer reference and a common bank account.

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[2] *BIC Code. SWIFT Bank Identifier Code.*

Bulk Settlement of Redemptions

Cash settlements across multiple redemption orders can be grouped by bulk payment reference and creditor bank account. The payment references provide an opportunity for product providers to group redemption payments grouping by currency, IBAN and payment reference.

Cash settlement details have been made optional in the redemption confirmation message. However, product providers should provide cash settlement details in the redemption confirmation message whenever this is possible. They should also include a cash settlement reference to assist with automated cash reconciliation.

Bulk Settlement of Subscriptions

TPAs can indicate a bulk cash settlement by using the same bulk payment reference and bank account details across several messages.

Decimal Numbers – supported decimal places

The ViaNova business requirements put no restriction on the number of decimal places specified in currency values, unit amounts and percentages other than those set down in the ISO 20022 standard. Care should therefore be taken when setting up new messaging links with any new counterparty that any actual decimal place limitations are noted and allowed for.

Redemption orders denominated as a percentage of total holding value

Stating a redemption order as a percentage of the total holding in a fund can lead to confusion when more than one order arrive on an account for a single dealing point.

1st Deal 50% from Fund 1

2nd Deal 50% from Fund 1 – Is this 50% of the remainder after deal 1 has been executed, or the remainder of the holding?

The group agreed to recommend that redemption orders denominated as a percentage should only ever use 100% - to indicate a total redemption.

We would also recommend this approach to the redemption legs of a switch.

Percentage values other than 100% are allowable on the subscription legs of a switch – since this is a means of dividing up the total proceeds of the redemption legs, and not a percentage of the total holding value.

Switch Orders

Switch orders are made up of a collection of redemption legs and subscription legs. The redemption legs are used to raise cash, which is then distributed according to the instructions included in the subscription legs. The switch message must only contain references to investment sub-accounts within the same investment account. The investment account must be specified in the Switch Order Details and be consistent in the Redemption and Subscription Leg details.

> Switch order denomination rules.
> These rules define the best practice for the denomination of switch messages in the UK corporate pensions industry.

1	Multiple redemptions can have different value denominators. A mixture of cash, units and percentages is permissible.
2	Subscription legs must all have the same denominator.
3	If redemption legs have a mixture of denominators, then the subscription legs must all be percentage denominated.
4	A message with multiple redemption legs and multiple subscription legs is permissible.
5	Switch order confirmations should represent the complete set of transactions which were executed to support the original switch order. Confirmations for a single switch order should be sent in a single message.
6	Cash subscriptions must have cash redemptions.

Table 2 Switch order rules.

Switch Types

Two type of switch transactions are supported by ViaNova business requirements:

Type 1 is a switch between funds with a single product provider and a single portfolio; a switch between two financial instruments in the same investment sub account

Type 2 is a switch between funds with a single product provider and two portfolios with the same beneficial owner; a switch between two financial instruments in two investment sub accounts within one investment account.

Rounding problems with switch legs denominated as a percentage

There is a problem when using percentages to denominate the size of subscription legs. When switch transactions are aggregated a small transaction can get lost if it represents a percentage of the redemption proceeds smaller than the number of decimal places which the product provider is capable of accepting.

If it is possible to denominate the redemption and subscription legs entirely in cash then transactions are not lost since the cash values are absolute and immune to rounding errors.

No agreement was reached on the resolution to this problem. However, TPAs should be aware of this problem and consider it when aggregating deals.

Trans-Currency Orders

It is possible for clients to submit orders denominated in a currency other than the fund base currency. Orders will only be accepted in currencies that had been agreed up front and some product providers may only agree to receiving orders in one currency.

Settlement may be requested in a different currency using the requested settlement currency element.

The order confirmation would confirm back the order details as received, so the currency of the confirmation net amount will be the same as the order net amount. If the order currency is not the same as the fund currency the product provider will state the exchange rate which was used to convert to the fund base currency and show the subscribed amount both in the subscribed currency and the fund currency.

The TPA should check with the product provider before embarking on multi-currency order processing.

Trans-Currency Switch Orders

A trans-currency switch is one that involves switching between funds with different base currencies. This type of transaction is seen mostly outside the UK market; most cases we have seen so far come out of Luxembourg.

There are two alternative approaches to the construction of switch confirmation messages live in the market at the moment. In both cases the switch confirmation subscription legs show the net amount in the fund base currency. The difference lies in whether the redemption leg confirmation net amounts are shown in the base currency of the fund being redeemed or in the base currency of the fund where the subscription is to be made.

In the cases where redemption legs are not denominated in the base currency of the fund being redeemed the base currency amount that was actually redeemed will probably appear in the 'from amount' element in the foreign exchange details.

Since there is no single market practice for trans-currency switch confirmations it will be necessary to check with your counterparty to see which approach they are taking. We are adding support for the FX details elements in the switch confirmation message to make both approaches allowable.

Standing Data

Product providers must publish standing data to enable the unambiguous identification of data items including (but not limited to):

- Investment accounts sub-accounts

- Financial instruments

- Groups of financial instruments, which can be grouped for inclusion in an order message

Receiving Orders

Order Status Messages

Product providers are required to send a status message as soon as possible after an order is received. Where multiple orders are contained within a message the status message should refer to all the orders in the original message.

The supported order statuses are: received, accepted, rejected and cancelled.

Received

The 'received' status message does not indicate whether an order has been accepted for dealing or not – it merely indicates that the message containing the order has been received. This status is useful where product providers are unable to make an immediate decision about an order but wish to respond as to the instructing party as soon as possible.

Accepted

The 'accepted' status message confirms that an order is accepted and is ready for execution. Execution is the moment when pricing is applied. This message also contains the expected trade date (T) and, optionally, the expected settlement date.

Rejected

The 'rejected' status message indicates that the order has been rejected and will not be executed. Often one or more reasons for the rejection will be provided. In the case of switch messages rejection reasons are linked to the particular redemption or subscription leg that caused the problem.

It is possible for Product Providers to reject individual orders within a multiple order message if they wish.

Cancelled

This message confirms that an order has been cancelled. This message is usually sent in response to an order cancellation request message and may contain the reason the order has been cancelled.

Cancelling Orders

A flexible approach to automation of order cancellations

There is flexibility in how the product provider responds to an order cancellation request message. Some product providers do not support STP order cancelations and so they will reject the cancellation request.

If there were multiple orders in the original order message, the product provider may cancel all of them even if the cancellation request is for only one of them.

Cancellations and bulk cash settlement

If orders are grouped together for settlement with a cash reference and bank account, and the TPA cancels one of the orders it is up to them to alert the product providers of any changes to the previously communicated bulk cash settlement details.

Cancelling a switch order

Switch orders must always be cancelled as a whole. It is not possible to cancel a switch leg on its own. Switch orders should be cancelled by quoting the switch order reference together with the original switch message reference.

Confirming Orders

Order confirmation messages confirm back the final details of an order including the number of units bought or sold, the price and the cash value.

If a data item is available for use as part of ViaNova business requirements (whether as a mandatory or optional item) and it is received in an order message, then it is mandatory that the item should be reflected back in the order confirmation message.

See the data dictionaries for each message for the details of what data items should be included in an order confirmation.

Bulk Cash Settlement Confirmation

Although cash settlement details are optional in the redemption order confirmation the best practice is that the Redemption Order Confirmation should reflect back the bulk cash settlement details from the original redemption order message and add in the source bank account from which the product provider will settle with the TPA. The actual cash settlement reference should also be provided.

ViaNova Reporting

Price Report

The price report messages should contain all the publishable price types for the financial instrument. Prices should be published when they became available rather than holding prices back to publish them in bulk.

It was agreed that there should be three options defining the contents of price messages:

i.   Prices for all non-zero holdings for all subscribed clients of a TPA.

ii.   Prices for all allowable funds for all subscribed clients (including those with a zero holding) of a TPA

iii. All the product provider's prices for all the product providers' funds.

The unique identifier of the financial instrument for which the price is being quoted may be an ISIN or a proprietary identifier.

Price Cancellation

Not supported for corporate pensions usage.

Price Types

The ViaNova group supports the use of four price types:

Price Type	ISO 20022 Code
Bid	BIDE
Mid	MIDD
Offer	OFFR
Swing	SWNG

Product providers may provide a combination of any of these price types.

A swinging price represents the prevailing price for a dealing date. The swinging price (or single dealing price) may have the same value as the Bid, Mid or Offer prices at a dealing date. Product providers may quote the Bid, Mid and Offer as well as the Swing price to indicate which way swinging price has swung.

It should also be noted that the definition of the Swing price in the ISO 20022 documentation does not accurately represent the use of this price type in the UK corporate pensions industry.

It is safe to assume that the ViaNova definitions of the Bid, Mid, Offer and Swing price types are those appertaining to the UK corporate pensions industry.

Holdings Reports

Product providers should report on all holdings for subscribed clients for a TPA.

Statement of Holdings

The contents of this message are intended for comparison purposes with TPAs' in-house systems. It is not intended that the valuations in this message should replace valuations on the TPAs' systems.

The holdings statement reference should be a reference to a statement. Where the statement is communicated over several statement pages the reference should be the same across all pages.

Statement of Holdings Cancellation

The statement of holdings cancellation message is not supported for corporate pensions use.

Scope of Holdings reporting

The minimum requirement for this project is that statement of holdings messages should be available for all subscribed defined contribution cases. Other cases, defined benefit cases for example, may be reported at the discretion of the product providers.

Transaction Statement Report

It has been agreed to introduce support for transaction statement reports in this new version of ViaNova. These reports are useful for reporting all the transactions on an investment account, including those not initiated by the TPA. This is of particular interest to those companies operating "benchmark" funds.

"Benchmark" funds are those which operate within an agreed set of asset allocation rules – known as Benchmarks – these rules define the asset distribution of the fund across a set of financial instruments. Investments and disinvestments from the fund are applied with a view to maintaining the asset allocation of the benchmark in-line with the stated goals. Investment and disinvestment orders are specified in cash and switch instructions are not supported for these products.

Because orders are placed at the "benchmark" level the order confirmations are also stated at the benchmark level. A virtual price of 1 GBP is used to complete the confirmation message. Thus, an investment of 1,000 GBP would be confirmed with an order confirmation with a value of 1,000 GBP – with a nominal unit quantity of 1,000. However, underlying this activity are a set of asset transactions which have been generated to maintain the appropriate asset allocation. Under previous versions of the ViaNova business requirements these transactions are not reported using ISO 20022 messages, instead product providers are producing reports in various formats to assist the TPA in reconciling their transactions.

One important consideration is that the transactions in the benchmark fund are not simply generated in response to client orders. The fund manager will also be doing periodic switch activity to bring the fund more closely in-line with its benchmark. Also, in some cases, disinvestments are made from the fund to cover the fund manager's fees. These transactions also need to be reported.

Usage
The statement of holdings message is sent by product providers to TPAs

Frequency of publication
The statement should be sent whenever there is activity on the sub account.

ViaNova Data Model

This ViaNova data model defines the business data elements required to support ViaNova order processing and reporting. Each data item has an indication of the data type, and whether it is considered a mandatory or optional item.

ViaNova automation consist of communicating the contents of the ViaNova data model with a counter party as part of the standard ViaNova order routing and reporting conversations described above. Delivery of this data can be by any mutually agreed technical means.

The majority of ViaNova messaging takes place using the ISO 20022 standard XML based messages over the SWIFT network and mappings have been produced to show how ISO 20022 can be used to implement ViaNova.

ViaNova Subscription Order		
Data Item	Type	Mandatory (M) or Optional (O)
Investment Account		M
Account ID	String(35)	M
Sub Account ID	String(35)	O
Order Reference	String(16)	M
Financial Instrument Identifier		M
Either		
ISIN	ISIN Identifier	M
Or		
Proprietary Identifier	String(35)	M
Identifier Source	String(35)	M
Subscription		M
Either		
Cash Value		
Currency Amount	Decimal	M
Currency Code (The order currency)	ISO 4217 Currency Code	M
Or		
Unit Quantity	Decimal	M
Total Cash Settlement		O
Value		O
Currency Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Reference	String(35)	O
Source Bank Account		O
Bank BIC	BIC Code	M
Account Identifier	IBAN Code	M
Target Bank Account		M
Bank BIC	BIC Code	M
Account Identifier	IBAN Code	M
Cash Settlement Date	Date	O

ViaNova Redemption Order		
Data Item	Type	Mandatory (M) or Optional (O)
Investment Account		M
Account ID	String(35)	M
Sub Account ID	String(35)	O
Order Reference	String(16)	M
Financial Instrument Identifier		M
Either		
ISIN	ISIN Identifier	M
Or		
Proprietary Identifier	String(35)	M
Identifier Source	String(35)	M
Redemption		M
Either		
Cash Value		
Amount	Decimal	M
Currency Code (The order currency)	ISO 4217 Currency Code	M
Or		
Unit Quantity	Decimal	M
Or		
Percentage (100% only)	Decimal	M
Cash Settlement		O
Value		O
Currency Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Reference	String(35)	O
Target Bank Account		M
Bank BIC	BIC Code	M
Account Identifier	IBAN Code	M
Requested Currency	ISO 4217 Currency Code	O

ViaNova Switch Order		
Data Item	Type	Mandatory (M) or Optional (O)
Investment Account		M
Account ID	String(35)	M
Order Reference	String(16)	M
Redemption Leg		Repeating (1..n)
Leg Identifier	String(16)	M
Investment Sub Account	String(35)	O
Financial Instrument Identifier		M
Either		
ISIN	ISIN Identifier	M
Or		
Proprietary Identifier	String(35)	M
Identifier Source	String(35)	M
Redemption		M
Either		
Cash Value		
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Or		
Unit Quantity	Decimal	M
Or		
Percentage of holding (100% only)	Decimal	M
Subscription Leg		Repeating (1..n)
Leg Identifier	String(16)	
Investment Sub Account	String(35)	O
Financial Instrument Identifier		M
Either		
ISIN	ISIN Identifier	M
Or		
Proprietary Identifier	String(35)	M
Identifier Source	String(35)	M
Subscription		
Either		
Cash Value		
Currency Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Or		
Unit Quantity	Decimal	M
Or		
Percentage of total redemption proceeds	Decimal	M

ViaNova Order Status Message		
Data Item	Type	Mandatory (M) or Optional (O)
Order Reference	String(16)	M
Order Status Report		M
Either		
Order Status	ViaNova Status: Accepted	
Expected Trade Date	DateTime	M
Expected Settlement Date	Date	O
Or		
Order Status	ViaNova Status: Received	M
Or		
Order Status	ViaNova Status: Rejected	M
Rejected Reason Code	ViaNova Order Rejection Code	M
Rejection Additional Information	String(350)	O
Switch Leg Rejection		Repeating(0..n)
Switch Leg ID	String(35)	M
Switch Leg Type	SUBSCRIPTION or REDEMPTION	M
Switch Leg Rejection Reason	String(350)	O
Or		
Order Status	ViaNova Status: Cancelled	
Cancellation Reason	ViaNova Cancellation Reason Code	O
Cancellation Additional Information	String(350)	O

ViaNova Order Rejection Code (Based on ISO 20022 RejectedStatusReason7Code)
Different Valuation Points [POIN]
Delivering Agent [ICAG]
Direct Debit [IDDB]
Intermediary [INTE]
Investment Account [SAFE]
Payment Card [IPAY]
Invalid Credit Transfer [ICTR]
Settlement Place [DEPT]
Receiving Agent [IVAG]
Safekeeping Place [ISAF]
Invalid Security Form [DFOR]
Financial Instrument Identification [DSEC]
Account Blocked For Corporate Action [BLCA]
Account Blocked For Transfer [BLTR]
Account Blocked Missing Documents [DOCC]
Not Enough Cash [MONY]
Not Enough Financial Instrument [SECU]
Financial Instrument Identification And Name [IDNA]

ViaNova Order Rejection Code
(Based on ISO 20022 RejectedStatusReason7Code)
Unaccepted Commission Waiving [UWAI]
Unaccepted Deal Currency [UDCY]
Unaccepted NAV Currency [UNAV]
Unaccepted Payment Method [UPAY]
Unaccepted Requested Settlement Currency [URSC]
Too High Units Or Amount To Subscribe [SHIG]
Too Low Units Or Amount To Subscribe [SLOW]
Unknown Linkages Reference [ULNK]
Physical Delivery Impossible [DLVY]
Duplicate Order Reference [ORRF]
Instructing Party Not Allowed For Account [IPAC]
Invalid Order Type [IOTP]
Not Compliant With SLA [NSLA] – *the default where no other code applies*
Cut Off Time [CUTO]
Too Late [LATE]
After Deadline [ADEA]
Invalid Cash Account [CASH]
Settlement Date [DDAT]
Financial Instrument Quantity [DQUA]
Trade Date [DTRD]
Fee Or Commission [FEEE]
Subscriber Or Redeemer [IEXE]
Settlement Amount Currency [NCRR]
Physical Settlement [PHYS]
Place Of Trade [PLCE]
Settlement Transaction [SETR]
RTGS System [RTGS]
No Cancellation Match [NRGM]
Invalid Settlement Amount [DMON]

ViaNova Cancellation Reason Code
(Subset of ISO 20022 CancelledStatusReason2Code)
Cancelled By Instructing Party [CANP]

ViaNova Subscription Order Confirmation		
Data Item	Type	Mandatory (M) or Optional (O)
Investment Account		M
Account ID	String(35)	M
Sub Account ID	String(35)	O
Order Reference	String(16)	M
Deal Reference	String(16)	M
Financial Instrument Identifier		M
Either		
ISIN	ISIN Identifier	M
Or		
Proprietary Identifier	String(35)	M
Identifier Source	String(35)	M
Subscription Confirmation		M
Cash Value		M
Amount	Decimal	M
Currency Code (The order currency)	ISO 4217 Currency Code	M
Unit Quantity	Decimal	M
Unit Price		M
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Price Type	ViaNova Price Type	M
Trade Date and Time	DateTime	M
Foreign Exchange		O
Subscription Amount (Fund Base Currency)	Decimal	M
Currency Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Exchange Rate	Decimal	M

ViaNova Redemption Order Confirmation		
Data Item	Type	Mandatory (M) or Optional (O)
Investment Account		M
Account ID	String(35)	M
Sub Account ID	String(35)	O
Order Reference	String(16)	M
Deal Reference	String(16)	M
Financial Instrument Identifier		M
Either		
ISIN	ISIN Identifier	M
Or		
Proprietary Identifier	String(35)	M
Identifier Source	String(35)	M
Redemption Confirmation		M
Cash Value		
Amount	Decimal	M
Currency Code (The order currency)	ISO 4217 Currency Code	M
Unit Quantity	Decimal	M
Percentage	Decimal	O
Unit Price		M
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Price Type	ViaNova Price Type	M
Trade Date	DateTime	M
Foreign Exchange		O
Redemption Amount (Fund base currency)		
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Exchange Rate	Decimal	M
Cash Settlement		O
Value		O
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Reference	String(35)	O
Source Bank Account		O
Bank BIC	BIC Code	M
Account Identifier	IBAN Code	M
Target Bank Account		M
Bank BIC	BIC Code	M
Account Identifier	IBAN Code	M
Cash Settlement Date	Date	O
Requested Currency	ISO 4217 Currency Code	O

ViaNova Switch Order Confirmation		
Data Item	Type	Mandatory (M) or Optional (O)
Investment Account		M
Account ID	String(35)	M
Order Reference	String(16)	M
Deal Reference	String(16)	M
Redemption Leg Confirmation		Repeating (1..n)
Leg Identifier	String(16)	M
Leg Execution Identifier	String(16)	M
Investment Sub Account	String(35)	O
Financial Instrument Identifier		M
Either		
ISIN	ISIN Identifier	M
Or		
Proprietary Identifier	String(35)	M
Identifier Source	String(35)	M
Redemption		M
Cash Value		M
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Unit Quantity	Decimal	M
Percentage	Decimal	O
Unit Price		M
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Price Type	ViaNova Price Type	M
Trade Date	DateTime	M
Subscription Leg Confirmation		Repeating (1..n)
Leg Identifier	String(16)	M
Leg Execution Identifier	String(16)	M
Investment Sub Account	String(35)	O
Financial Instrument Identifier		M
Either		
ISIN	ISIN Identifier	M
Or		
Proprietary Identifier	String(35)	M
Identifier Source	String(35)	M
Subscription		M
Cash Value		M
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Unit Quantity	Decimal	M
Unit Price		M
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Price Type	ViaNova Price Type	M
Trade Date	DateTime	M

ViaNova Switch Order Confirmation		
Data Item	Type	Mandatory (M) or Optional (O)
Foreign Exchange		O There is no market practice defined for the use of this FX section. Please consult with your counter party if you wish to use it.
Exchange Rate	Decimal	M
Currency from which the quoted currency is converted in an exchange rate calculation.	ISO 4217 Currency Code	M
Currency into which the unit currency is converted in an exchange rate calculation.	ISO 4217 Currency Code	M
From Amount		O
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
To Amount		O
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M

ViaNova Price Type This is based on a superset of ISO 20022 price types: TypeOfPrice10Code, TypeOfPrice9Code and TypeOfPrice28Choice
Actual
Bid
Cancellation
Creation
Daily Dividend Rate
Estimated NAV
Guaranteed
Indicative
Market
Mid
Net Asset Value
Non Adjusted Unpublished
Offer
Reinvestment
Swing
Switch

ViaNova Order Cancellation Request		
Data Item	Type	Mandatory (M) or Optional (O)
Order Reference	String(16)	M

ViaNova Order Cancellation Status			
Data Item		Type	Mandatory (M) or Optional (O)
Order Reference		String(16)	M
Cancellation Status			M
Either			
	Cancellation Accepted Status	ViaNova Accepted Status	M
Or			
	Cancellation Rejected Status	ViaNova Cancellation Rejection Reason	O
	Extended Cancellation Reason	String (350)	O
Note: A proposed change to the ISO 20022 message schema setr.017.001.04 means that the cancellation rejected status code and the extended cancellation reason are both now optional – at least one of these should be provided. But this also means that both may now be provided.			

ViaNova Accepted Status
Pending
Completed

ViaNova Cancellation Rejection Reason
Missed Cancellation Cutoff
Not Allowed to Cancel
Not Compliant with SLA
Legally Impossible

ViaNova Data Model. ViaNova Standard Business Requirements. Version 5.00.

VIANOVA

Reporting

ViaNova Price Report		
Data Item	Type	Mandatory (M) or Optional (O)
Price Report Reference	String(16)	M
Report Function	ViaNova Price Report Function	M
Price Valuations		Repeating (1..n)
Price Reference	String (35)	M
Valuation Date and Time	DateTime	M
Financial Instrument Identifier		M
Either		
ISIN	ISIN Identifier	M
Or		
Proprietary Identifier	String(35)	M
Identifier Source	String(35)	M
Price Details		Repeating (1..n)
Price Type	ViaNova Price Type	M
Base Currency Price		M
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M
Alternative Currency Price		O
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	M

ViaNova Holdings Report		
Data Item	Type	Mandatory (M) or Optional (O)
Holdings Report Reference	String(16)	M
Statement Date	DateTime	M
Creation Date	DateTime	M
Account Identifier	String(35)	M
Sub Account Balance		Repeating (1..n)
Sub Account Identifier	String(35)	M
Balance		Repeating(1..n)
Financial Instrument		
Either		
ISIN	ISIN Identifier	
Or		
Proprietary Identifier	String(35)	M
Identifier Source	String(35)	M
Aggregate Quantity Units	Decimal	M
Holding Value		O
Amount	Decimal	M
Currency Code	ISO 4217 Currency Code	

ViaNova Holdings Report

Data Item			Type	Mandatory (M) or Optional (O)
	Price			O
		Amount	Decimal	M
		Currency Code	ISO 4217 Currency Code	M
		Price Type	ViaNova Price Type	M

ViaNova Transaction Statement

Data Item			Type	Mandatory (M) or Optional (O)
Transaction Statement Reference			String(16)	M
Statement Period				M
	From Date		DateTime	M
	To Date		DateTime	M
Creation DateTime			DateTime	M
Account Identifier			String(35)	M
Sub Account Balance				Repeating (1..n)
	Sub Account Identifier		String(35)	M
	Transactions			Repeating(1..n)
		Transaction Type	ViaNova Transaction Type	M
		Order Reference	String(16)	O
		Deal Reference	String(35)	O
		Switch Leg Reference	String(16)	O
		Switch Leg Execution Reference	String(35)	O
		Financial Instrument		M
		Either		
		ISIN	ISIN Identifier	M
		Or		
		Proprietary Identifier	String(35)	M
		Identifier Source	String(35)	M
		Units	Decimal	M
		Cash Amount		O
		Amount	Decimal	M
		Currency Code	ISO 4217 Currency Code	M
		Valuation DateTime	Datetime	M
		Price		O
		Price Type	Any ISO 20022 TypeOfPrice10Code	M
		Amount	Decimal	M
		Currency Code	ISO 4217 Currency Code	M

ViaNova Transaction Type

ViaNova Transaction Type
Redemption
Subscription
Switch In
Switch Out

Encashment for Fees

ViaNova Order Processing Scenarios

These scenarios illustrate a selection of standard messaging scenarios, and variants based on messages arriving in unexpected orders. They are intended to help system integrators understand the issues involved in building a messaging application capable of supporting ViaNova.

Scenario 1 – Subscription, Redemption and Switch "Happy Day"
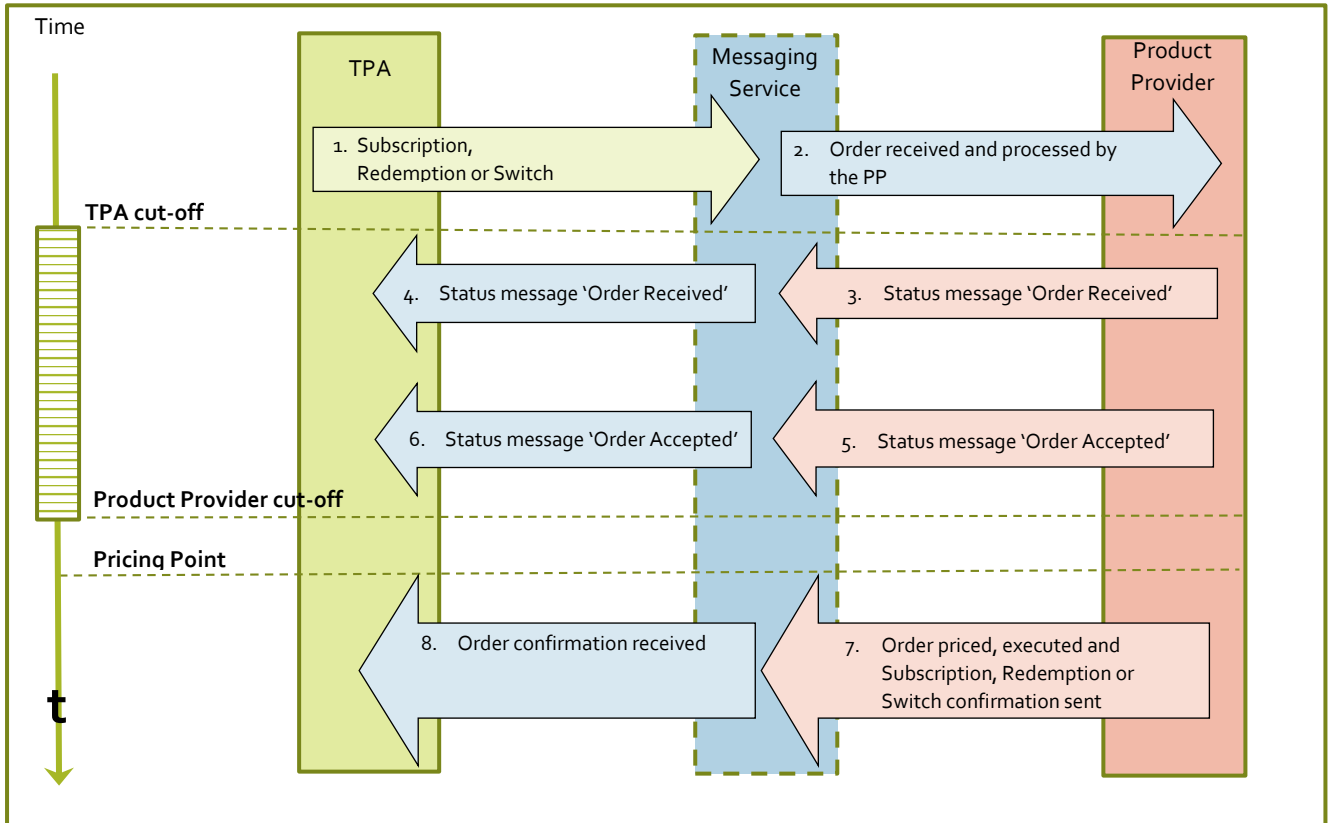
Scenario 2 – Subscription, Redemption and Switch Order Rejection
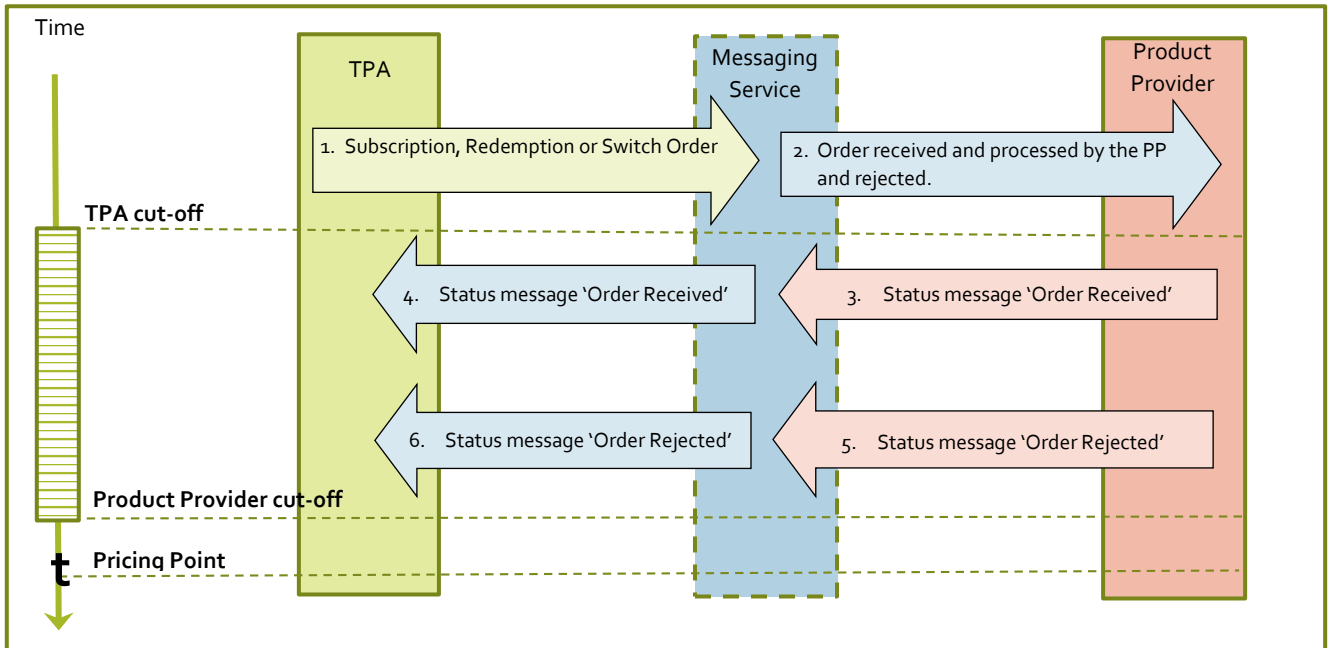
Scenario 3 – Subscription, Redemption and Switch Cancellation

Time

TPA

Messaging Service

Product Provider

2. Subscription, Redemption or Switch Order

2. Order received and processed by the PP

4. Status message 'Order Received'

3. Status message 'Order Received'

6. Status message 'Order Accepted'

5. Status message 'Order Accepted'

7. Order cancellation request

8. Cancellation request received and processed

TPA cut-off

10. Cancellation status message "cancellation has been received

9. Cancellation status message "cancellation has been received and is pending"

12. Cancellation status message "cancellation completed"

11. Cancellation status message "cancellation completed"

14. Order status message "order cancelled"

13. Order status message "order cancelled"

Product Provider cut-off

t **Pricing Point**

Scenario 4 – Manual Cancellation
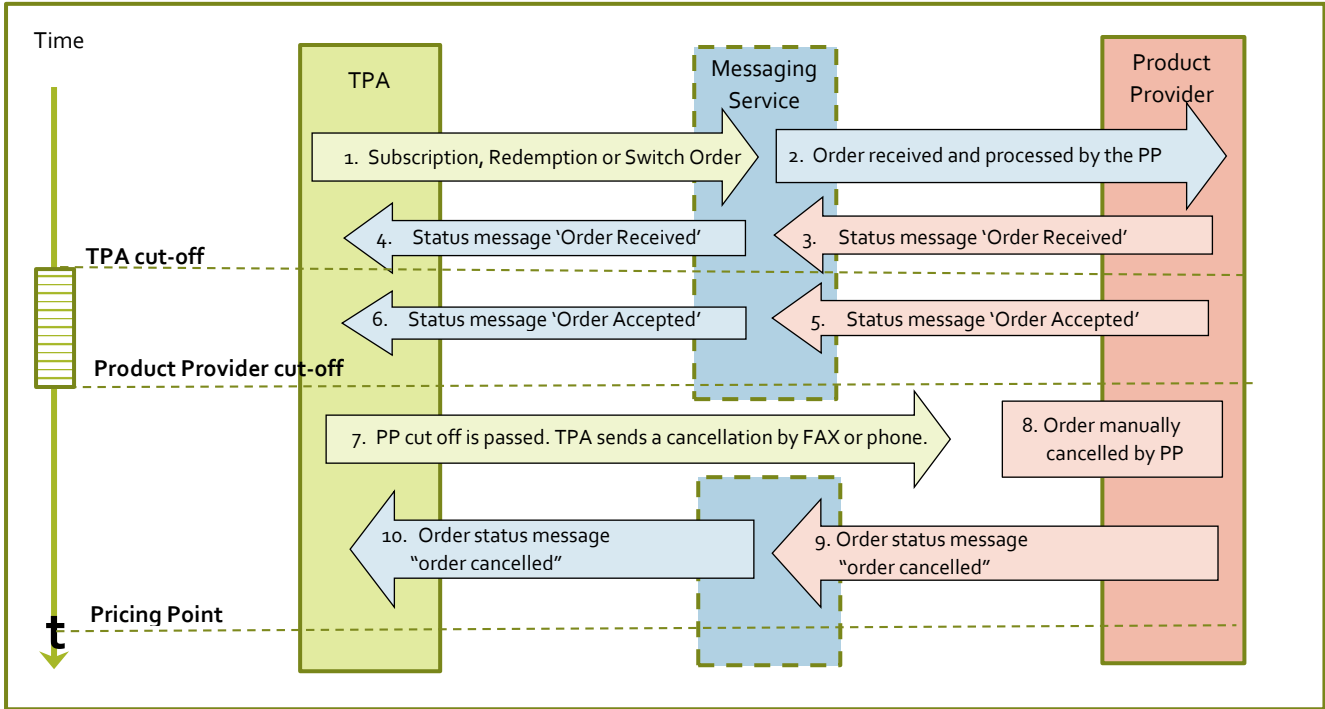
Scenario 5 – Automated Cancellation Rejection
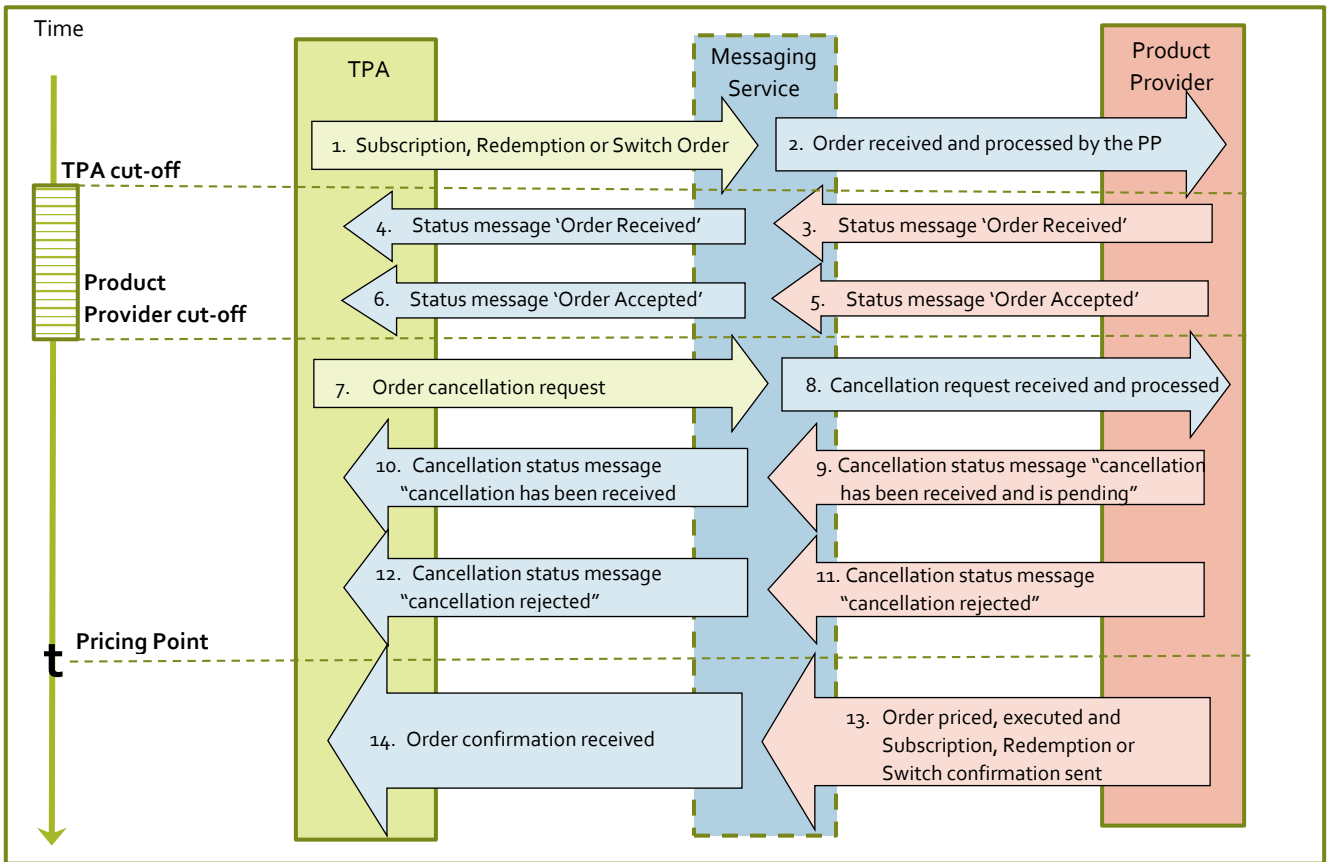
Scenario 6 – Automated Cancellation Rejection and Manual Resolution

Time

TPA cut-off

Product Provider cut-off

TPA

Messaging Service

Product Provider

1. Subscription, Redemption or Switch Order

2. Order received and processed by the PP

4. Status message 'Order Received'

3. Status message 'Order Received'

6. Status message 'Order Accepted'

5. Status message 'Order Accepted'

7. Order cancellation request

8. Cancellation request received and processed

10. Cancellation status message "cancellation has been received

9. Cancellation status message "cancellation has been received and is pending"

12. Cancellation status message "cancellation rejected"

11. Cancellation status message "cancellation rejected"

13. Phone call by TPA

14. Manual fax to confirm the cancellation (if agreed by

15. Order manually cancelled by PP

17. Order status message "order cancelled"

16. Order status message "order cancelled"

Pricing Point

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Asynchronous 1 - "Happy Day" with delayed order status
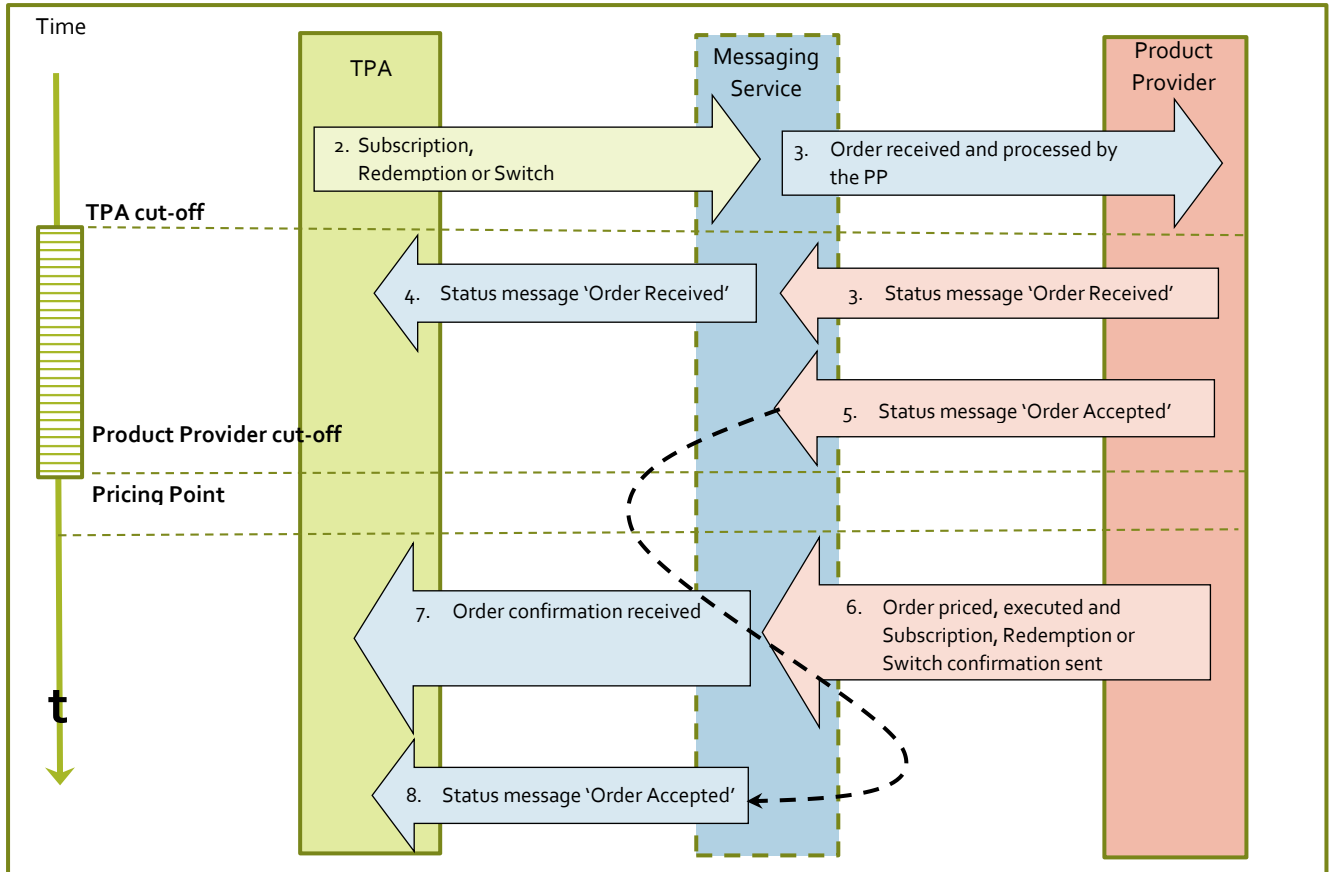
Asynchronous 2 – STP Cancellation with order and cancellation status

Time

| TPA | Messaging Service | Product Provider |

1. Subscription, Redemption or Switch Order → 2. Order received and processed by the PP →

4. Status message 'Order Received' ← 3. Status message 'Order Received' ←

5. Order cancellation request → 6. Status message 'Order Accepted' ←

8. Status message 'Order Accepted' ← 7. Cancellation request received and processed →

TPA cut-off

10. Cancellation status message "cancellation has been received ← 9. Cancellation status message "cancellation has been received and is pending" ←

12. Order status message "order cancelled" ← 11. Cancellation status message "cancellation completed" ←

14. Cancellation status message "cancellation completed" ← 13. Order status message "order cancelled" ←

Product Provider cut-off

Pricing Point

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N.B – Order statuses can arrive in any order, all are valid and must be handled.

Asynchronous 3 – Overlapping message rejection and cancellation.

Time

| TPA | Messaging Service | Product Provider |

1. Subscription, Redemption or Switch Order

2. Order received and processed by the PP

4. Status message 'Order Received'

3. Status message 'Order Received'

5. Status message 'Order Rejected'

6. Order cancellation request

7. Cancellation request received and processed

TPA cut-off

8. Cancellation status message "cancellation has been received and is pending"

10. Cancellation status message "cancellation rejected"

9. Cancellation status message "cancellation rejected"

11. Cancellation status message "cancellation has been received ..."

Product Provider cut-off

12. Status message 'Order Rejected'

Pricing Point

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N.B – Order statuses can arrive in any order, all are valid and must be handled.

Asynchronous 4 – Overlapping cancellation rejection.

1. Subscription, Redemption or Switch Order
2. Order received and processed by the PP

TPA cut-off

4. Status message 'Order Received'
3. Status message 'Order Received'

6. Status message 'Order Accepted'
5. Status message 'Order Accepted'

Product Provider cut-off

8. Order cancellation request
9. Cancellation request received and processed

11. Cancellation status message "cancellation has been received ..."
10. Cancellation status message "cancellation has been received and is pending"

12. Cancellation status message "cancellation accepted"

13. Phone Call by TPA

14. Manual Fax to Cancel (if agreed)
15. Order manually cancelled by PP

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17. Order status message "order cancelled"
16. Order status message "order cancelled"

18. Cancellation status message "cancellation accepted"

N.B – Order statuses can arrive in any order, all are valid and must be handled.

Asynchronous 5 – STP Cancellation Rejection

```
Time

                TPA            Messaging        Product
                                Service          Provider

        1.  Subscription, Redemption or Switch      2.  Order received and processed by the PP

TPA cut-off

        4.  Status message 'Order Received'      3.  Status message 'Order Received'

Product
Provider cut-off   6.  Status message 'Order Accepted'      5.  Status message 'Order Accepted'

        7.  Order cancellation request      8.  Cancellation request received and processed

        10. Cancellation status message       9.  Cancellation status message "cancellation
            "cancellation has been received         has been received and is pending"

                                  11. Cancellation status message
                                      "cancellation rejected"

Pricing Point
 t

        13. Order confirmation received      12. Order priced, executed and
                                                 Subscription, Redemption or
                                                 Switch confirmation sent

        14. Cancellation status message
            "cancellation rejected"
```

Asynchronous 6 – Cancellation arrives before order

45