

## Enhanced Consolidated Portfolio Composition Input Data File (DATATRAK 11301)

Consolidated PCF Fields							Mapping to Legacy Layout	
Type 1 - Header Record (required record type for all portfolios)				Record Length=250				
	Description	Len	Start	Type	Comments	Required/ Optional Field	Domestic (11297 & 11299)	Foreign (26364)
1	Record Type	2	1	A/N	01 = Record Type 1	Required		
2	File Description	25	3	A/N	"Portfolio Composition"	Optional	N/A	N/A
3	ETF Agent	8	28	N	NSCC Member Number Right Justified with leading zeros	Required	Trustee (Record Type-1, Position 118-121)	Trustee (Record Type-1, Position 117-120)
4	File Identifier	8	36	A/N	Input File Number	Optional	N/A	N/A
5	Processing Date	8	44	N	CCYYMMDD	Required	N/A	N/A
6	Processing Time	6	52	N	HHMMSS	Optional	N/A	N/A
7	Future Use	192	58					
<b>END OF RECORD</b>								

Type 2 - Portfolio Header Record (required record type for all portfolios)					Record Length=250	Mapping to Legacy Layout		
	Description	Len	Start	Type	Comments	Required/ Optional Field	Domestic (11297 & 11299)	Foreign (26364)
1	Record Type	2	1	A/N	02 = Record Type 2	Required	Corresponds to Record Type 1 on Legacy product	Corresponds to Record Type 1 on Legacy product
2	NSCC Portfolio ID	9	3	A/N	NSCC assigned Portfolio ID of the basket	Required	Domestic Unit CUSIP (Record Type-1, Position 3-11)	Foreign Basket CUSIP (Record Type-1, Position 3-11)
3	ETF Agent	8	12	N	NSCC Member Number Right Justified with leading zeros	Required	Trustee (Record Type-1, Position 118-121)	Trustee (Record Type-1, Position 117-120)
4	Component Count	8	20	N	99,999,999	Required	Component Count (Record Type -1, Position 27-34)	Component Count (Record Type-1, Position 27-34)
5	Estimated T-1 Cash Amount Per Creation Unit	14	28	N	999,999,999,999.99	Optional* *must be numeric	Estimated Cash Amount Per Creation Unit (Record Type-1, Position 12-25)	Estimated Cash Amount Per Creation Unit (Record Type-1, Position 12-25)
6	Sign field for Estimated T-1 Cash Amount Per Creation Unit	1	42	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional	Sign field for Estimated Cash Amount Per Creation Unit (Record Type,1 Position 26)	Sign field for Estimated Cash Amount Per Creation Unit (Record Type-1, Position 26)
7	Net Asset Value Per Creation Unit	17	43	N	999,999,999,999.99999	Optional* *must be numeric	Net Asset Value Per Creation Unit (Record Type-1, Position 44-56)	Net Asset Value Per Creation Unit (Record Type-1, Position 49-61)
8	Sign field for Net Asset Value Per Creation Unit	1	60	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional	Sign field for Net Asset Value Per Creation Unit (Record Type-1, Position 57)	Sign field for Net Asset Value Per Creation Unit (Record Type-1, Position 62)

Type 2 - Portfolio Header Record (required record type for all portfolios)					Record Length=250		Mapping to Legacy Layout	
	Description	Len	Start	Type	Comments	Required/ Optional Field	Domestic (11297 & 11299)	Foreign (26364)
9	Estimated T-1 Cash Amount Per ETF	14	61	N	999,999,999,999.99	Optional* *must be numeric	Estimated T-1 Cash Amount Per Index Receipt (Record Type-1, Position 35-42) <b>**note** length is 8 on input legacy *</b>	Estimated Cash Amount Per Index Receipt (Record Type-1, (Position 35-47) <b>**note** length is 13 on input legacy *</b>
10	Sign field for Estimated T-1 Cash Amount Per ETF	1	75	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional	Sign field for Estimated Cash Amount Per Index Receipt (Record Type-1, Position 43)	Sign field for Estimated Cash Amount Per Index Receipt (Record Type-1, Position 48)
11	Net Asset Value Per ETF	17	76	N	999,999,999,999.99999	Optional* *must be numeric	Net Asset Value Per Index Receipt (Record Type-1, Position 58-73) <b>**note** length is 16 on legacy input but only 13 on legacy output</b>	Net Asset Value Per Index Receipt (Record Type-1, (Position 63-75) <b>**note** length is 13 on input legacy *</b>
12	Sign field for Net Asset Value Per ETF	1	93	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional	Sign field for Net Asset Value Per Index Receipt (Record Type-1, Position 74)	Sign field for Net Asset Value Per Index Receipt (Record Type-1, (Position 76)
13	Total Cash Amount Per Creation Unit	14	94	N	999,999,999,999.99	Optional* *must be numeric	Total Cash Amount Per Creation Unit (Record Type-1, Position 75-90) <b>**note** length is 16 on legacy input but only 13 on legacy output</b>	Total Cash Amount Per Creation Unit (Record Type-1, Position 77-89) <b>**note** length is 13 on input legacy *</b>

Type 2 - Portfolio Header Record (required record type for all portfolios)					Record Length=250		Mapping to Legacy Layout	
	Description	Len	Start	Type	Comments	Required/ Optional Field	Domestic (11297 & 11299)	Foreign (26364)
14	Sign field for Total Cash Amount Per Creation Unit	1	108	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional	Sign field for Total Cash Amount Per Creation Unit (Record Type-1, Position 91)	Sign field for Total Cash Amount Per Creation Unit (Record Type-1, Position 90)
15	Total Shares Outstanding Per ETF on T-1	12	109	N	999,999,999,999	Optional* *must be numeric	Total Shares Outstanding Per ETF (Record Type-1, Position 92-103)	Total Shares Outstanding Per Index Receipt (Record Type-1, Position 91-102)
16	Dividend Amount Per ETF on T-1	14	121	N	999,999,999,999.99	Optional* *must be numeric	Dividends Outstanding Per Index Receipt (Record Type-1, Position 104-116)	Dividend Amount Outstanding Per Index Receipt (Record Type-1, Position 103-115)
17	Sign field for Dividend Amount Per ETF on T-1	1	135	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional	Sign field for Dividends Outstanding Per Index Receipt (Record Type-1, Position 117)	Sign field for Dividend Amount Outstanding Per Index Receipt (Record Type-1, Position 116)
18	<b>Estimated value of Cash-in-lieu components per Creation Unit</b>	14	136	N	999,999,999,999.99	Optional* *must be numeric	N/A	N/A
19	Cash Only Indicator	1	150	A/N	"Y" = Cash Only (create/redeem with Cash Only) space = No restrictions (any combination of cash or securities)	Optional	Cash or Security Indicator (Record Type-1, Position 122)	N/A
20	<b>ETF Expense Ratio on T-1</b>	3	151	N	Expressed in Basis Points	Optional* *must be numeric	N/A	N/A
21	<b>Total Asset Value of ETF Fund on T-1</b>	17	154	N	999,999,999,999.99999	Optional* *must be numeric	N/A	N/A
22	Future Use	80	171		Spaces		Move spaces	Move spaces
<b>END OF RECORD</b>								

Type 3 – Detail Component Record (optional record type for Cash Only portfolios)					Record Length=250		Mapping to Legacy Layout	
	Description	Len	Start	Type	Comments	Required/ Optional Field *	Domestic (11297 & 11299)	Foreign (26364)
1	Record Type	2	1	A/N	03 = Record Type 3 (one per component)	Required	Corresponds to Record Type 2 on Legacy product	Corresponds to Record Type 2 on Legacy product
2	NSCC Portfolio ID	9	3	A/N	NSCC assigned Portfolio ID of the basket	Required	Domestic Unit CUSIP (Record Type-1, Position 3-11)	Foreign Basket CUSIP (Record Type-2, Position 3-11)
3	<b>Component ID Code</b>	2	12	A/N	01=CUSIP 02=SEDOL 03=ISIN 04=ISIN/SEDOL 05=Bloomberg 06=Reuters 07=ICE / NYSE Life 99=Other	Required	N/A	N/A
4	Component ID	25	14	A/N	This is defined by the value in Component ID Code field	Required		
	o CUSIP	9	14	A/N	Identifies Domestic component		Domestic Component CUSIP (Record Type-2, Position 12-20)	N/A
	o SEDOL	7	14	A/N	Official SEDOL number		N/A	SEDOL Number (Record Type-2, Position 64-70)
	o ISIN	12	14	A/N	Identifies Foreign or Domestic Component		N/A	Foreign Component ISIN # (Record Type-2, Position 12-23)
	o ISIN/SEDOL	19	14	A/N	Combination ISIN/SEDOL <b>*Recommended for non-US domiciled securities</b>		N/A	N/A

\* 'Required' field within an optional record type needs to be populated only if that record type is submitted

Type 3 – Detail Component Record (optional record type for Cash Only portfolios)					Record Length=250	Mapping to Legacy Layout		
	Description	Len	Start	Type	Comments	Required/ Optional Field *	Domestic (11297 & 11299)	Foreign (26364)
	- ISIN	12	14	A/N				
	- SEDOL	7	26	A/N				
	o All other types	25	14	A/N	Free form field identifying other type of asset class		N/A	N/A
5	Component Quantity	13	39	N	Quantity of component per creation unit (par value for fixed income securities)	Required	Share Quantity (Record Type-2, Position 21-29) <i>* Note * Currently 9 on input and 8 on output</i>	Share Quantity (Record Type-2, Position 24-32) <i>* Note * Currently 9 on input and 8 on output</i>
6	<b>Sign Field for Component Quantity</b>	1	52	A/N	"-" indicates negative value (short position) space = positive All other values treated as space (positive) ** Note: a component with negative quantity (short component), can only be created/redeemed for cash	Optional	N/A	N/A
7	<b>External Settlement Date</b>	8	53	N	ETF Agent provided settlement date for non-DTC settling components	Optional	N/A	N/A

\* 'Required' field within an optional record type needs to be populated only if that record type is submitted

Type 3 – Detail Component Record (optional record type for Cash Only portfolios)					Record Length=250		Mapping to Legacy Layout	
	Description	Len	Start	Type	Comments	Required/ Optional Field *	Domestic (11297 & 11299)	Foreign (26364)
8	<b>New Security Indicator</b>	1	61	A/N	N = New component in Portfolio space = not new	Optional	New Security Indicator (Record Type-2, Position 30)	New Security Indicator (Record Type-2, Position 33)
9	<b>Cash In Lieu Indicator</b>	1	62	A/N	Y= ETF agent provided indicator for component to be substituted for cash in a create/redeem;  space=No substitution ----- ----- <b>Note: CIL is set to X by NSCC if one of the following conditions is met for create / redeem eligible Portfolios: - Component is not in NSCC Security Master Database - Portfolio is a cash only portfolio</b>	Optional	N/A	N/A
10	<b>Component Description</b>	60	63	A/N	ETF Agent defined description	Optional	N/A	Component Description (Record Type-2, Position 34-63)
11	Future Use	128	123		Spaces			Move spaces
<b>END OF RECORD</b>								

\* 'Required' field within an optional record type needs to be populated only if that record type is submitted

Type 4 - Custom Distribution Record (required record type for Custom portfolios only)					Record Length=250	Mapping to Legacy Layout		
	Description	Len	Start	Type	Comments	Required /Optional Field *	Domestic (11297 & 11299)	Foreign (26364)
1	Record Type	2	1	A/N	04= Record Type 4	Required	Corresponds to Record Type 3 on Legacy product	N/A
2	NSCC Portfolio ID	9	3	A/N	NSCC assigned Portfolio ID of the basket	Required	Domestic Unit CUSIP (Record Type-3, Position 3-11)	N/A
3	Specified recipient	8	12	A/N	Clearing Number of Authorized Participant to receive this file or LIST = distribution of AP's associated with ETF Agent or ALL = distribute to all subscribers (new value that will be treated as a standard basket for the legacy subscription and will be available to all subscribers on the web interface). <b>This will not be available until all subscribers have converted</b>	Required	Specified Recipient 01-10 (Record Type-3, Position 12-51)	N/A
4	Future Use	231	20		Spaces			
<b>END OF RECORD</b>								

\* 'Required' field within an optional record type needs to be populated only if that record type is submitted



Type 99 - Trailer Record (New Record) (required record type for all portfolios)					Record Length=250		Mapping to Legacy Layout	
	Description	Len	Start	Type	Comments	Required/ Optional Field	Domestic (11297 & 11299)	Foreign (26364)
1	Record Type	2	1	A/N	99 = Trailer Record (one per file)	Required but if not submitted ETF agent receives warning on end of day output AutoRoute #02260421	N/A	N/A
2	Final Transmission	1	3	A/N	Y = Final Transmission space = Not Final Transmission	Required	N/A	N/A
3	Record Count	13	4	N	Number of records in transmission (including trailer)	Required	N/A	N/A
4	Future Use	234	17		Spaces			
<b>END OF RECORD</b>								