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# Technical Specifications

Settembre 2019

# TVTIC definition

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V 1.1



**London**  
Stock Exchange Group

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September 2019

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## 1.0 Introduction

### 1.1 Scope

TVTIC (Trading venue transaction identification code) represents “a number generated by trading venues and disseminated to both the buying and selling parties in accordance with Article 12 of RTS 24”.

The document *TVTIC definition* provides the general guidelines to calculate starting from the Trade identifier the TVTIC value that is fully compliant with the requirements of CDR 2017/580 and with ESMA’s technical specifications for Transaction Reporting for both Millennium IT and SOLA platform.

### 1.2 Document history

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Version	Changes
1.0	Initial Version
1.1	Change to paragraph 2.2 – new TVTIC calculation rule for SOLA platform

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## 2.0

The trading venue transaction identification code shall be alphanumeric (with max. length of 52 chars) and “unique, consistent and persistent per ISO10383 segment MIC and per trading day”.

ESMA’s technical specifications for the TVTIC to be used in Transaction Reports, while indicating this should be an alphanum-52, require that the TVTIC to be received by ESMA’s systems includes only Latin capital letters and numbers.

A trading venue transaction identification code (TVTIC) fulfilling these requirements can be calculated by the customer considering the following general rules.

### 2.1 MIT Platform

On Millennium IT platform Trade Identifiers are unique per Market and in particular they are provided:

- On the Native interface via the *TradeMatchID* field of the Execution report message. This is a numeric field (8 bytes integer field) already compliant CDR 2017/580 and with ESMA’s technical specifications for Transaction Reporting. An example of a TradeMatchID via the native interface could be the following:

*1771558787874903 (TVTIC)*

- On the FIX interface via the TradeMatchID field (TrdMatchID -> tag 880). The TrdMatchID on FIX (tag 880) is in base 62, can include uppercase letters A-Z, lowercase letters a-z and numbers, and needs to be converted to an 8 byte integer to make it compliant with CDR 2017/580 and with ESMA’s technical specifications for Transaction Reporting. An example of a TradeMatchID via the FIX interface is the following

*T873Hj4Pjz*

The procedure to calculate the TVTIC for FIX protocol is the following:

- Take the TrdMatchID (tag 880) -> T873Hj4Pjz

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- Remove the left most byte -> *873Hj4Pjz*
- Convert the rest of the digits from base 62 to decimal (base 10) using the base 62 dictionary -> *1771558787874903 (TVTIC)*

## 2.2 SOLA Platform

On SOLA platform Trade Identifiers are unique per instrument. This means trades on two different instrument can have the same trade identifiers.

With the current version of SOLA platform (**SOLA12**) It is possible to make the identifier unique concatenating the “Instrument ID + Group ID + Trade Number”.

- The procedure to calculate the TVTIC for Native/SAIL protocol is the following
  - Take the *Trade Number* field (i.e NT execution notice message) -> *00000064*
  - Concatenate Instrument ID + Group ID (Seco, i.e. IU00z0) + Trade Number -> *IU00z000000064*
  - Decode from base 62 to base 10 -> *3697302535470272517007224 (TVTIC)*
- The procedure to calculate the TVTIC for FIX protocol is the following
  - Take the *ExecID* field (i.e. execution report message) -> *NT00006670IV00z1BA*
  - Isolate trade number and Seco -> *00006670* and *IV00z1*
  - Concatenate Seco + Trade Number -> *IV00z100006670*
  - Decode from base 62 to base 10 -> *3700528802451010523866266 (TVTIC)*

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With the new version of SOLA platform (**SOLA14**) the TVTIC code will be calculated according to a new and different rule, and will be provided directly by the trading platform and disseminated in native execution reports and FIX execution notices.

- The procedure to calculate the TVTIC for Native/SAIL protocol on SOLA 14 is the following
  - o Take the *Trade Number* field (i.e NT execution notice message) -> *00000064*
  - o Take the Instrument id and GroupID (Seco -> IU00z0)
  - o Isolate the GroupID and decode it from base 62 to base 10 (i.e z0 -> 3782)
  - o Concatenate Instrument ID + base 10 converted Group ID + Trade Number -> *IU00378200000064*
- The procedure to calculate the TVTIC for FIX protocol on SOLA14 is the following
  - o Take the ExecID field (i.e. execution report message) -> *NT00006670IV00z1BA*
  - o Isolate trade number and Seco (Instrument ID + GroupID) -> *00006670* and *IV00z1*
  - o From the Seco isolate the GroupID and decode it from base 62 to base 10 (i.e z0 -> 3783)
  - o Concatenate Instrument ID + base 10 converted GroupID + Trade Number -> *IV00378300006670*

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## 3.0 Ancillary services

Market Participants are also reminded that Borsa Italiana is offering end-of-day reconciliation reports (the “Reconciliation Report” services) for its cash and derivatives markets, that include a converted version of the TVTIC.

In case of interest for this value-added services offered by Borsa Italiana, please refer to section “Borsa Italiana – Trading services” of Borsa Italiana’s website [www.borsaitaliana.it/borsaitaliana/gestione-mercati/gestione-mercati.en.htm](http://www.borsaitaliana.it/borsaitaliana/gestione-mercati/gestione-mercati.en.htm) and, more specifically, to the following links:

- MIT601 - Report Reconciliation Specification;
- Report Reconciliation Specification.

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## 4.0 ANNEX A – Conversion table from base 62 to base 10

0	0	16	G	32	W	48	m
1	1	17	H	33	X	49	n
2	2	18	I	34	Y	50	o
3	3	19	J	35	Z	51	p
4	4	20	K	36	a	52	q
5	5	21	L	37	b	53	r
6	6	22	M	38	c	54	s
7	7	23	N	39	d	55	t
8	8	24	O	40	e	56	u
9	9	25	P	41	f	57	v
10	A	26	Q	42	g	58	w
11	B	27	R	43	h	59	x
12	C	28	S	44	i	60	y
13	D	29	T	45	j	61	z
14	E	30	U	46	k		
15	F	31	V	47	l		