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# Technical Specifications

September 2020

# TVTIC definition

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V. 1.3



**London**  
Stock Exchange Group

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February 2020

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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
1.2	Removed reference to SOLA 12
1.3	Change to paragraph 2.2 (added reference to protocol fields where TVTIC is provided) Added Annex B

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## 2.0 TVTIC Definition

The trading venue transaction identification code shall be alphanumerical (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:

- o 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 instruments can have the same trade identifiers.

On SOLA platform the TVTIC code is provided directly by the trading platform and disseminated via both FIX and Native protocols in the following fields:

- Native protocol
  - Field name '*Trading Venue Transaction Identification Code*'
- FIX protocol
  - Field name '*RegulatoryTradeID*'

Please refer to Annex B for the rule applied for the calculation of TVTIC.

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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		

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## Annex B – TVTIC calculation rule

In native execution reports and FIX execution notices TVTIC is calculated according to the following rule:

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