



PROFICIENCY TESTING

LBMA A&R 2019

Neil Harby, LBMA Chief Technical Officer

18-March-2019



AGENDA

01

LBMA Proficiency testing

02

Gold 2019

03

Silver 2019

04

Trends

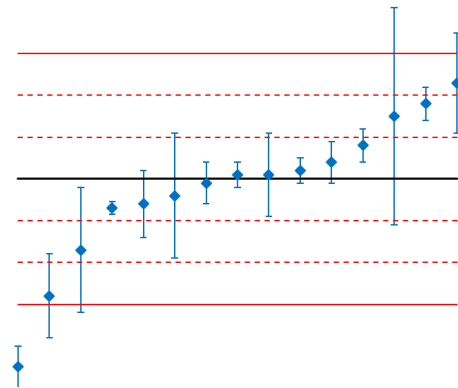
LBMA PROFICIENCY TESTING.

2012 to 2019.

- **Gold introduced in 2012;**
- **Silver introduced in 2018;**
- **Laboratories grouped into:**
 - Good Delivery List (GDL)
 - Other laboratories: non-GDL, supervisors, assay offices, government and quasi-government laboratories.
- **Samples**
 - Prepared by Metalor under ISO 17034.

WHAT IS PROFICIENCY TESTING?

- Also called “Interlaboratory testing” or “Round-robin”
- Homogeneous material analysed by multiple laboratories
- Comparison of results obtained on an anonymous basis



Z-score

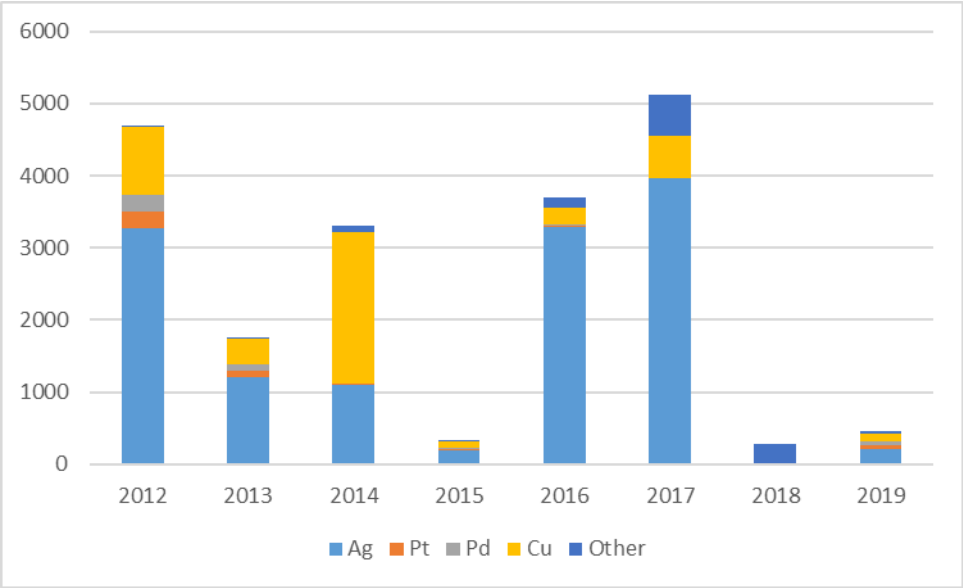
Normal: between -2 and 2

Warning: < -2 but > -3 or > 2 but < 3

Action: < -3 or > 3

SAMPLE COMPOSITIONS

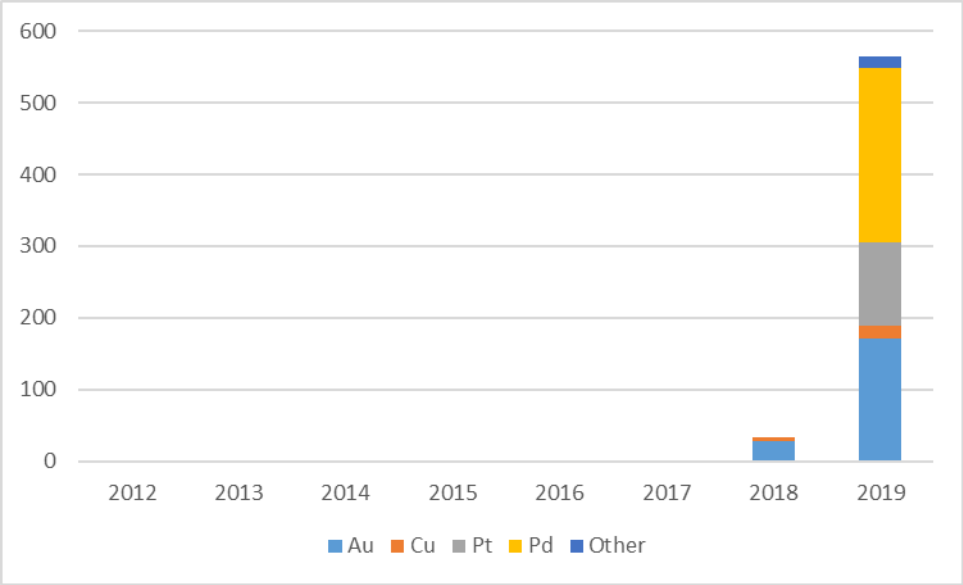
Gold



	2012	2013	2014	2015	2016	2017	2018	2019
Ag	3269	1206	1100	202	3282	3955	23	214
Pt	235	91	15	9	26			50
Pd	231	90		10	12			51
Cu	936	349	2101	100	228	598		103
Other	5	5	96	14	153	572	252	48

SAMPLE COMPOSITIONS

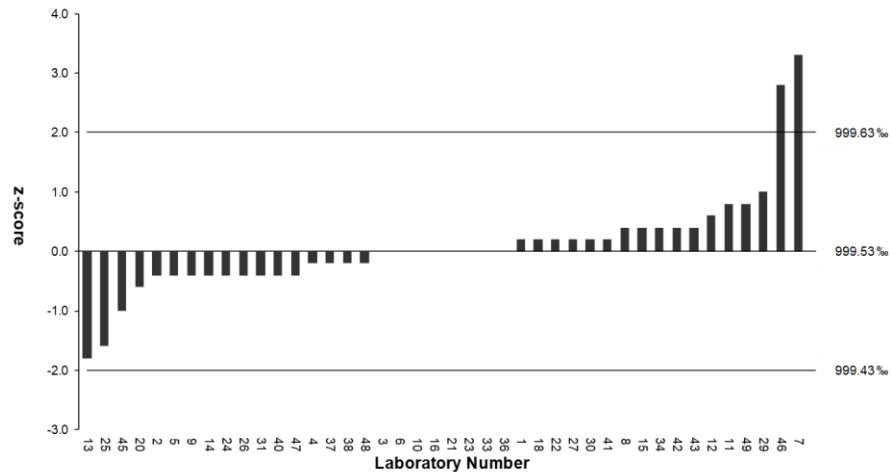
Silver



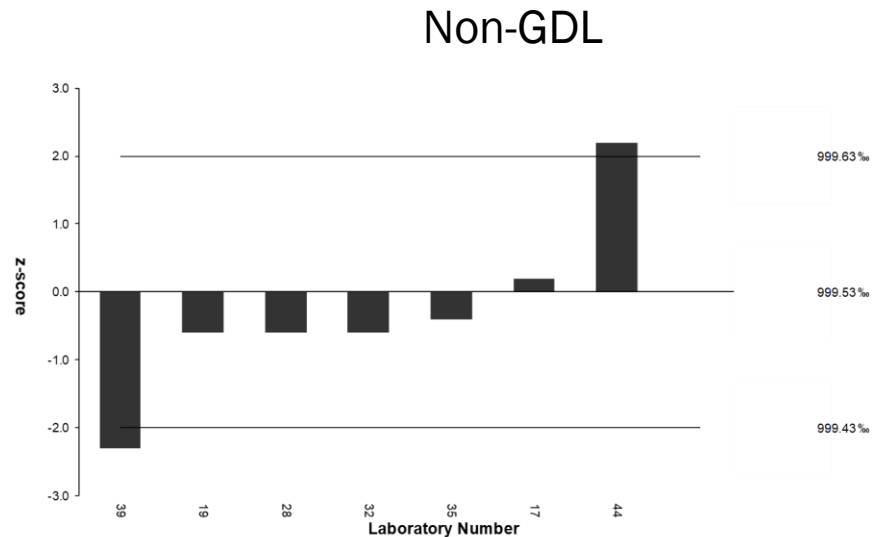
	2012	2013	2014	2015	2016	2017	2018	2019
Au							29	172
Cu							5	17
Pt								116
Pd								244
Other								15

GOLD 2019

Z-scores

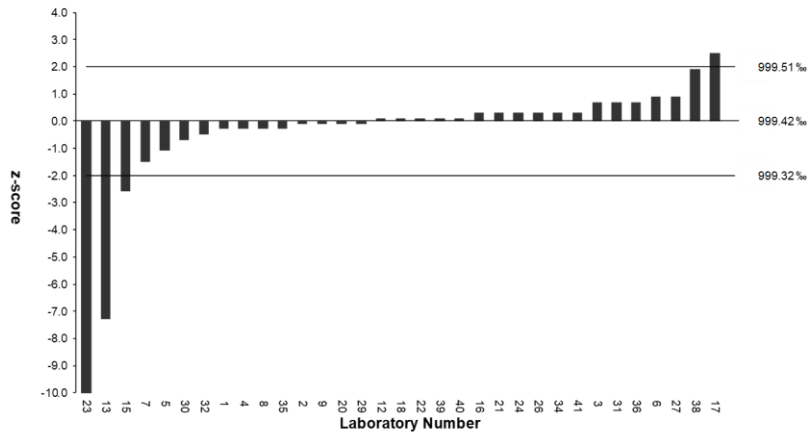


GDL

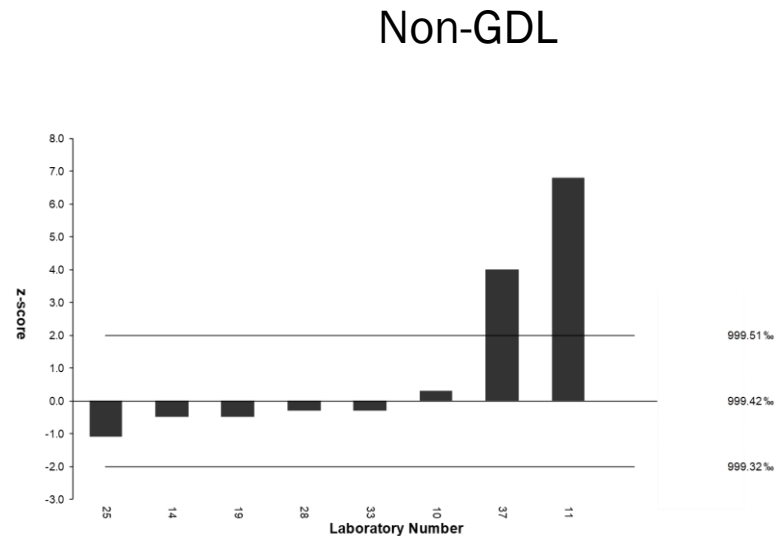


SILVER 2019

z-scores



GDL



CONCLUSIONS

- Invaluable tool for serious laboratories.
- Essential for ISO17025 (not vice versa...).
- Fascinating and insightful trend data.
- Need to encourage participation.
- Is the frequency appropriate?



NEIL.HARBY@LBMA.ORG.UK



lbma.org.uk



@lbmaexecutive



LBMA



LBMA