The financial yardstick applied

Dutch involvement with financial benchmarks

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1. Executive summary

The financial industry cannot exist without benchmarks.[1] Benchmarks serve as yardsticks by which the industry determines the current values of a wide range of financial products, for example interest rates, foreign exchange (FX) rates or commodity prices. As such, benchmarks fulfil an important role in financial markets and hence affect the daily lives of us all.

Both De Nederlandsche Bank (DNB) and the Netherlands Authority for the Financial Markets (Autoriteit Financiële Markten – AFM) regard the restoration of justified trust in the financial sector as their prime objective. That is why in 2014 they launched a joint thematic review regarding the contributions to benchmarks, the risks of manipulation and the level of success achieved by Dutch financial institutions in managing the inherent integrity risks. The review also focuses on the role of benchmark users.

The review shows that financial institutions involved with benchmarks do not yet adequately manage the inherent risks. This is problematic, as DNB and the AFM expect professional market participants to properly recognise and manage the risks of benchmark manipulation. They should actively pursue a high ethical standard regarding their involvement with benchmarks. The Libor scandal and, more recently, the international settlements concerning exchange rate manipulation underline the importance of this objective.

Financial institutions have voiced a need for more guidance on ways to bring such risks under control. The present report of DNB and the AFM aims to address this need. It summarises the supervisors' findings and observations and offers good practices. Institutions should consider these good practices when improving their internal controls.

The review methodology was developed in an ongoing exchange of ideas and experiences with supervisory authorities abroad. The review focuses on a wide range of benchmarks, including the ones used to establish interest rates, foreign exchange rates and commodity prices. Equity markets and equity benchmarks are already monitored on an ongoing basis by the AFM, these were therefore excluded from this review. Furthermore the AFM has, to date, not received any signals regarding the possible manipulation of equity benchmarks which would warrant further investigation in this review.

1 For the broad definition of a benchmark, which DNB and the AFM apply for the purpose of this study, see the European Market Abuse Regulation, http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32014R0596.

Findings

Based on the thematic review, DNB and the AFM have the following findings:

- Many benchmarks to which Dutch financial institutions contribute are still susceptible to manipulation, also due to the underlying mechanics.[2]
- This risk necessitates stringent internal controls at financial institutions to ensure the integrity of their contributions to the relevant benchmarks. However, DNB and the AFM have observed that Dutch financial institutions do not sufficiently meet such requirements.
- The Libor fines and various supervisory authorities' investigations have served to enhance awareness among Dutch financial institutions regarding the implications of benchmark manipulation, leading to their withdrawal from some benchmark panels.[3]
- Nevertheless, most institutions were relatively late in taking stock of their involvement with various benchmarks, improving their internal control environment and having their senior management actively raise the ethical culture within the organisation.
- The improvements that have been made so far are not yet sufficient. DNB and the AFM therefore expect institutions to step up their efforts in improving their processes, systems and conduct in order to effectively mitigate and manage the integrity risks related to their involvement with benchmarks on an ongoing basis.
- In addition, DNB and the AFM expect professional market participants using benchmarks to assume responsibility and take adequate measures to protect themselves from the risk of benchmark manipulation.

Good practices

Some Dutch financial institutions have taken valuable steps forward in the assessment and management of risks associated with benchmarks. On the whole, however, there is still room for improvement. In order to guide and promote the improvement process, DNB and the AFM have formulated a set of good practices. Institutions may use these as a guideline in their efforts to prevent and detect benchmark manipulation. Financial institutions have a statutory duty to ensure that their operations, including their contributions to benchmarks, are sound and ethical.

2 Authorities and supervisors are currently working at an international level on proposals to improve the robustness of price-setting mechanisms.

3 DNB and the AFM are committed to the importance and the continued existence of benchmarks and do not encourage institutions to renounce their participation.

Good practices

1. Institutions regularly evaluate their involvement with benchmarks and align their involvement with the nature, size and risk profile of their business.
2. Each of the *three lines of defence* possesses high-level knowledge and risk awareness regarding the benchmarks the institution is contributing to.
3. Control policies relating to benchmarks are uniformly implemented and upheld throughout all areas and locations of the institution.
4. Communications and transaction patterns relating to benchmarks are permanently and coherently monitored for evidence of unethical conduct.
5. Senior management sets the tone for minimising integrity risks on trading floors by actively promoting ethical behaviour and disciplining inappropriate behaviour.
6. Staff are encouraged and empowered to report possible breaches of integrity (committed by colleagues or other market participants) internally, and such reports are followed up.
7. Evaluation and sanctioning of breaches of integrity, such as (attempted) benchmark manipulation, is applied uniformly and followed up by appropriate disciplinary measures to prevent recurrence.
8. Integrity aspects are explicitly included in the drafting and implementation of performance and remuneration indicators for (groups of) traders.
9. Benchmark users take known unethical conduct, such as benchmark manipulation, into account when selecting counterparties and hold existing counterparties accountable when observing unethical conduct.
10. When requesting transactions to be performed on a benchmark, users observe due care in deciding what information is provided when to which counterparty or counterparties.

Follow-up

In 2015, DNB and the AFM will complete the following activities:

- assessing the institutions' progress in realising improvements to their risk management processes, including adherence to known good practices;
- finalising the review of Dutch financial institutions' involvement with foreign exchange trading activities and their involvement with relevant benchmarks; and
- performing a more in-depth examination of the involvement of Dutch financial and non-financial companies with commodity benchmarks.

Surveillance of benchmark manipulation

According to the Ministry of Finance, effective action against benchmark manipulation is key in protecting market participants and safeguarding trust in the financial markets.

As of 1 January 2015, therefore, the AFM[4] has the explicit authority to act against benchmark manipulation.[5] This measure anticipates European legislation, including the Market Abuse Regulation (MAR).[6] The new power supplements the existing instruments available to the Dutch supervisors, in that it provides the possibility to instigate criminal proceedings in addition to existing administrative-law powers.[7]

Reading guide

Section 2 discusses the concept of benchmarks and the roles played by various participants involved. Section 3 outlines the risk of benchmark manipulation, while Section 4 details the involvement of Dutch participants with several benchmarks. Sections 5, 6 and 7 set out the findings and observations of the thematic review with respect to contributors to benchmarks, participants involved in FX trading and the users of benchmarks.

4 www.afm.nl/vragen-manipulatie-benchmark

5 Section 5:58a of the Financial Supervision Act (*Wet op het financieel toezicht – Wft*) and Regulation ((EU) No. 596/2014).

6 See also the EU Market Abuse Directive (2014/57/EU) and Regulation (EU) No. 596/2014.

7 Suspected benchmark manipulation could already be reported to the criminal authorities, but under different criminal-law categories such as forgery.

2. The concept of benchmarks

For a thorough understanding of how benchmarks work, it is important to distinguish between submission benchmarks and transaction-based benchmarks.

A submission benchmark (or panel benchmark) is compiled on the basis of prices, values, estimates or levels reported by selected participants to the benchmark's central administrator. The benchmark administrator then determines and publishes the benchmark at a particular point in time. Well-known examples of submission benchmarks are Euribor and Libor.[8] Some financial benchmarks relating to commodities[9] are compiled in a similar manner. For instance the Brent/Platts crude oil benchmark and the London Gold Fixing gold benchmark.

A transaction-based benchmark, by contrast, is compiled and published by the central administrator on the basis of actual transaction data. An important benchmark for exchange rates, compiled on the basis of transactions, is the WM/Reuters.[10] The WM/Reuters is set every hour for 160 FX pairs. The main reference point is the daily '4 p.m. fix', which is regarded as the cleanest indicator of that day's exchange rate. Many market participants are willing to trade at this rate or value their portfolios by it. Another well-known benchmark compiled on the basis of transactions is the Euro OverNight Index Average (Eonia), which provides an indication of the rate at which banks may borrow from each other for one night.

All types of benchmarks may be susceptible to manipulation, but the likelihood will vary depending on the way a benchmark is compiled. In the case of submission benchmarks such as Euribor and Libor there is, for instance, the risk of collusion between a select group of participants providing estimates of the interest rate to the administrator. Transaction-based benchmarks contain the risk that participants, individually or as a group, will perform transactions in anticipation of the short and sharply delineated 'fixing window' in which the benchmark is determined.

With any benchmark at least the following three participants are involved: (i) a *contributor*, (ii) an *administrator* and (iii) a *user*.

8 On a global scale, the total value involved in financial contracts linked to Libor and Euribor exceeds EUR 500,000 billion.

9 Some EUR 3 billion worth of commodity derivatives are traded each year with the use of benchmarks – see also: http://ec.europa.eu/internal_market/securities/docs/benchmarks/130918_impact-assessment_en.pdf.

10 It has been calculated on the basis of the latest available data from the Bank of International Settlements (BIS, April 2013) that daily global FX trades then amounted to USD 5.3 trillion (i.e. USD 5,300 billion).

Contributor: participant providing prices, values, estimates or levels to the administrator. Market participants may also be considered contributors simply by carrying out transactions.

Administrator: participant responsible for compiling, determining and publishing benchmarks. Examples include stock exchanges or other independent participants such as the European Money Markets Institute or the International Swaps and Derivatives Association.

User: any professional market participant using benchmarks directly or indirectly.

3. Risk of manipulation

Both submission benchmarks and transaction-based benchmarks are inherently susceptible to manipulation. This is for instance due to the divergent interests of the various participants involved in the benchmarking process. Conflicts of interests may, for instance, relate to an institution's own interest versus its customers' interests, or a difference between the personal and business interests of individual traders. The nature of manipulation risks will of course differ across benchmarks. Yet some degree of inherent risk is always present[11] and is the resultant of a benchmark's several characteristics.

The inherent risk related to submission benchmarks increases with the presence of the following characteristics:

- constructions where the benchmark is set on the basis of contributions from a *small group of participants* that know each other;
- situations where the benchmark is set on the basis of input that is *subjective and difficult to verify*. Example: panel members submit estimated interest rates that cannot be verified easily; and
- situations where *outliers* are weighed heavily in the benchmark setting process.

In the case of transaction-based benchmarks, key risk factors are:

- situations where a *small number of participants* have a large (or very large) combined market share with much impact on the benchmark setting process;
- the existence of an *illiquid market* whereby the benchmark is compiled from only a limited number of transactions; and
- the existence of a *short fixing window*, increasing the relative impact of large transactions.

The benchmark setting process needs to be transparent. It is important that all those involved are aware how the benchmark is determined, so that a *level playing field* is created. However, this does not imply that contributors should know whether and when they will be asked to contribute to the benchmark, or whether their contribution will actually be used in setting the benchmark. That should be the sole discretion of the benchmark administrators, precisely for the purpose of countering attempts to manipulate the benchmark. In practice, this approach is used for a number of benchmarks, whereas others employ a fixed panel, a fixed compilation methodology and a fixed polling timeframe.

11 'Inherent risk' here means the risk that a benchmark may be manipulated purely on account of its characteristics and irrespective of whether or not any checks and balances are provided.

International regulations and principles

The International Organization of Securities Commissions (IOSCO) has issued principles regarding the management and use of financial benchmarks.[12] Likewise, the Financial Stability Board (FSB) has issued principles for improved controls around FX benchmarks.[13] At the European level, the European Banking Association (EBA) and the European Securities and Markets Authority (ESMA) have published principles for banks that contribute to benchmarks.[14] They stipulate, for instance, that banks should have strict policies in place for all relevant steps of the process and should adequately manage all potential sources of conflicting interests. DNB and the AFM were involved in the development of these principles and fully endorse them.

The European Commission has proposed a draft Regulation governing the determination process and the use of various types of benchmarks.[15] The Regulation has yet to be adopted but is expected to be implemented in 2016. The Regulation includes provisions for registration and licensing requirements and for ongoing supervision of benchmark administrators. As mentioned above, Dutch legislation has anticipated the commencement of European legislation allowing the AFM to supervise benchmark manipulation since 1 January 2015.

International and national supervision

In the United Kingdom it has been decided to place Libor under the supervision of the Financial Conduct Authority and to transfer the benchmark's administration to an independent administrator. This decision was prompted by the Wheatley report.[16] Meanwhile, the British authorities have also decided to place seven other benchmarks under supervision as well.[17] As mentioned above, in an international context steps have been taken to reduce the risk to manipulate submission benchmarks.[18]

12 International Organization of Securities Commissions, 'Principles for the Regulation and Supervision of Commodity Derivatives Markets Final Report September 2011': http://www.iosco.org/library/pubdocs/pdf/IOSCOPD358.pdf

13 http://www.financialstabilityboard.org/wp-content/uploads/r_140930.pdf?page_moved=1

14 http://www.esma.europa.eu/system/files/2013-659_esma-eba_principles_for_benchmark-setting_processes_in_the_eu.pdf

15 Proposal for a Regulation of the European Parliament and of the Council on indices used as benchmarks in financial instruments and financial contracts (COM (2013) 641 final).

16 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/191762/wheatley_review_libor_finalreport_280912.pdf

17 http://www.fca.org.uk/news/fca-to-regulate-seven-additional-financial-benchmarks Sonia and Ronia, WM/Reuters London 4pm Closing Spot Rate, ISDAfix, London Gold Fixing, LMBA Silver Price, ICE Brent Index.

18 For instance by the FSB following an IOSCO review: http://www.financialstabilityboard.org/2014/07/r_140722/ and http://www.financialstabilityboard.org/2014/07/r_140722a/

In recent years, international supervisory authorities have performed several intrusive and wide-ranging investigations into benchmark manipulation. A selection of these investigations is highlighted in the box below.

Investigation into the possible manipulation of: Euribor (European Commission[19] and others), exchange rates (several supervisory authorities worldwide[20], including DNB and the AFM[21]), precious metals (US and UK supervisors[22]), aluminium (US Senate[23]) and oil (CFTC and European Commission[24]).

DNB and the AFM can take action under administrative laws against benchmark manipulation by financial institutions under their supervision. They are also able to report integrity breaches and (potential) criminal offences to the public prosecutor's office to be tried under criminal law.

19 http://europa.eu/rapid/press-release_IP-13-1208_en.htm
20 http://www.bloomberg.com/infographics/2014-08-13/forex-investigation-a-global-affair.html
21 http://www.afm.nl/nl/over-afm/thema/handel-infrastructuur-integer/onderzoek-manipulatierisico-benchmarks.aspx
22 See e.g. the CFTC's silver inquiry: http://www.cftc.gov/PressRoom/PressReleases/pr6709-13
23 For the report, see: http://www.hsgac.senate.gov/download/report-wall-street-involvement-with-physical-commodities
24 http://europa.eu/rapid/press-release_MEMO-13-435_en.htm
25 Amendment memorandum to the draft 'Act amending the Wft and other Acts relating to financial markets', identified as TK 2013-2014, 33 918, no. 5. 9/10

Legal basis underpinning DNB's/AFM's supervisory powers against benchmark manipulation:

- DNB → Sections 3:10 and 3:17 of the *Wft*, requirement to pursue sound and ethical business policies.
- AFM → Equivalent powers under Sections 4:11 and 4:14 of the *Wft*.
  → As of 1 January 2015: Section 5:58a of the *Wft*, prohibition on benchmark manipulation.

The AFM's main focus in supervising benchmark manipulation is on institutions and financial instruments that have a significant impact on the Dutch market.[25] In principle however, the AFM's scope for supervision of benchmark manipulation is wider. More details are provided in the box below.

The AFM has competence regarding benchmark manipulation if:

- the manipulation has effect in the Netherlands, the place of perpetration being anywhere in the Netherlands, any EU Member State or any non-EU state;
- the manipulation has effect in another EU Member State, whereas the place of perpetration is in the Netherlands.

In exercising its supervision, the AFM uses signals from the market as one of its sources of information. Market participants are required to contact the AFM if they suspect (attempts of) manipulation or other non-ethical conduct related to benchmarks.[26] Furthermore, financial institutions are required under Section 12 of the Decree on Prudential Rules for Financial Undertakings (*Besluit prudentiële regels Wft – Bpr*) to record incidents, take corrective measures and inform DNB accordingly. An incident is defined by the *Wft* as 'an act or occurrence that constitutes a serious threat to the ethical conduct of business by the financial institution concerned'.

Suggested further reading: the AFM has published a Q&A on benchmark manipulation supervision on its website: www.afm.nl.[27]

26 Mail to: STRdesk@afm.nl or dial +31 (0)20 797 3716.
27 www.afm.nl/vragen-manipulatie-benchmark

4. Dutch involvement with benchmarks

As most benchmarks are set and administered outside the Netherlands, this review focuses on Dutch contributors to and users of benchmarks, in particular interest rate, FX and commodity benchmarks.

DNB and the AFM have reviewed the involvement of Dutch financial institutions with benchmarks, by means of:

- in-house data analysis;
- a survey among banks;
- a survey among both financial and non-financial participants focussing on benchmarks;
- interviews with banks and other (financial) participants;
- round tables with market participants; and
- ongoing information exchanges with foreign supervisors such as the FCA, CFTC and BaFin.

Interest rate benchmarks

Only the larger banks contribute to well-known often-used interest rate benchmarks such as Libor, Euribor and Eonia. Otherwise, the influence of Dutch financial institutions on submission-based interest rate benchmarks is limited. Some banks do, however, contribute to local interest rate benchmarks in Europe and Asia.

Dutch financial and some non-financial participants use interest rate benchmarks in settling internal transactions and performance rating, and to value swaps and income from debt instruments. Also, they use local foreign benchmarks, for instance in covering the interest rate risk on a local FX deal.

FX benchmarks

Dutch participants, both banks and other financial and non-financial participants, contribute to the compilation of an FX benchmark when their trades fall within 'fixing windows' or 'fixes' (such as the WM/Reuters 4 p.m. fix) within which transactions are captured to be used in setting a benchmark FX rate. Some banks also contribute to local FX benchmarks, either through transactions or via a panel. The exchange rates on many 'non-deliverable' instruments for emerging markets are, for instance, set by panels.[28]

The WM/Reuters and the ECB fixes in particular are used by many Dutch market participants because they allow better verification and justification of trades compared to transactions outside the fix, where rates may fluctuate. Also, benchmarks are often used (indirectly) to cover FX risks on trades in especially smaller currencies.

Suggested further reading: for more information about the role of Dutch banks in the FX market, see Section 6 below.

28 For earlier reporting on the manipulation of this instrument in Singapore, see also: http://www.ft.com/intl/cms/s/0/fed38a0a-d4d5-11e2-b4d7-00144feab7de.html#axzz3Mnm5kvZ5

Commoditybenchmarks

Dutch financial institutions contribute to the setting of commodity benchmarks because they trade in underlying markets or in derivative financial products. Dutch participants also use commodity benchmarks like the Standard & Poor's Goldman Sachs Commodity Index (S&PGSCI) as performance indicators.

To gain more insight, DNB and the AFM will review Dutch participants involvement with commodity benchmarks more closely in 2015. This in-depth thematic review is prompted by a 2014 report by the US Senate[29] revealing the active and conflicting roles played by three US banks that trade in commodities while owning production and storage capacity at the same time. The situation in the Netherlands appears to be different, because Dutch banks perform financing deals only on behalf of customers. Potentially, though, Dutch non-financial participants might be able to exert a similar influence on commodity benchmarks, given the nature and magnitude of their activities on both physical and financial commodity markets.

Examples of interest rate, FX and commodity benchmarks

Some examples of benchmarks by type

Interest rate	FX	Commodity
■ Libor	■ WM/Reuters 4 p.m. Londen fix	■ LME Aluminum
■ Euribor	■ ECB-fix	■ OIL-BRENT-ICE
■ EONIA	■ NDF (emerging markets)	■ NYMEX
■ Jibor	■ EMTA	■ ROZ / IPD
■ Wibor		■ S&P GSCI
■ KOFIA		■ ICE-ENDEX

29 See the US Senate report: http://www.hsgac.senate.gov/download/report-wall-street-involvement-with-physical-commodities

5. Manipulation risks: increased risk-awareness among contributors

Following the Libor scandal, several inquiries were launched around the world into the possible manipulation of benchmarks by their contributors.[30] In some cases, procedures and controls related to benchmarks were tightened by both administrators and supervisors. This often involved the imposition of additional requirements on contributing banks, such as regular audits by an external auditor.

The thematic review undertaken by DNB and the AFM shows that Dutch institutions, especially banks, have become more aware of their involvement in the setting of benchmarks, partly as a result of various international penalties and inquiries. However, their management of manipulation risks is still insufficient.

Actions taken so far to improve the control environment include:

- drafting and tightening policies and procedures concerning the contribution to benchmarks;
- strengthening surveillance of the submission process (including the four-eyes principle and segregation of functions), together with improvements in the supporting IT tooling;
- embedding benchmark processes in regular monitoring and review function of the second and third line of defence; and
- line management taking responsibility for assessing and sanctioning actual or suspected manipulation attempts.

Good practice: Institutions regularly evaluate their involvement with benchmarks and align their involvement with the nature, size and risk profile of their business.

With respect to these improvements, DNB and the AFM have the following observations to make:

- The measures were initiated relatively late and are still not completed.[31]
- The measures serve, in fact, to repair deficiencies in institutions' sound operational management with respect to benchmarks.
- Institutions' initial measures are directed at benchmarks that had received much media attention, while their risk management surrounding other, less conspicuous benchmarks still needs to be improved.
- Improvement measures are mainly being developed and rolled out at the head office, whereas further steps to embed the measures at locations around the world – needed to restore group-level control over involvement with benchmarks – remain outstanding.

30 http://www.dnb.nl/nieuws/nieuwsoverzicht-en-archief/persberichten-2013/dnb298704.jsp

31 As early as June 2012, for instance, Barclays received stiff fines for Libor manipulation, with prominent media coverage.

Good practice:

- Each of the *three lines of defence* possesses high-level knowledge and risk awareness regarding the benchmarks the institution is contributing to.
- Control policies relating to benchmarks are uniformly implemented and upheld throughout all areas and locations of the institution.

Institutions were not fully aware of their role as contributors to transaction-based benchmarks. Whereas they used to view themselves as mere users of a benchmark, they now come to realise that with their transactions, they are in fact contributing to the benchmark. This emerging awareness results in part from several international investigations and from learning about the EBA/ESMA definition of a benchmark in the context of this review.

DNB and the AFM observe that in particular banks have only recently launched a number of improvements regarding their involvement with transaction-based benchmarks, such as:

- reviewing their role as contributors to various benchmarks;
- examining their own present and past trading conduct and way of communicating in relation to certain benchmarks;
- evaluating existing policies and procedures surrounding benchmarks;
- launching a broader review of the internal control environment concerning certain benchmarks, including the implementation of continuous transactions and communications monitoring.

DNB and the AFM expect institutions to complete the improvement actions for all benchmarks they are involved with at short notice, so as to minimise the risk of benchmark manipulation going forward.

Chat behaviour in relation to benchmark manipulation

Various investigations worldwide into FX manipulation (like in other benchmark manipulation investigations) have shown that unethical conduct can be detected by a systematic review of recorded communications, both written and oral, with a specific focus on communications in chatrooms. Companies such as Bloomberg and Reuters offer services for the creation and moderation of chatrooms, where two or more participants may converse with one another. Financial institutions make intensive use of such services.

Benchmark investigations further show that staff and managers use several communication channels to share their manipulation schemes in advance, to instruct others to manipulate or to ask others to participate in their schemes. Mainly on account of the large volume of chat communications and the particular language used, it is difficult for internal and external supervisors to recognise unethical conduct such as benchmark manipulation. Traders communicate both internally and with counterparties, using an own internal language (slang) comprehendible only by insiders.[32]

32 See for an example the communication among FX traders as published by the CFTC: http://www.cftc.gov/ucm/groups/public/@newsroom/documents/file/hsbcmisconduct111114.pdf.

Until recently, communications by staff (traders and salespeople) were not monitored by line management or control functions. But meanwhile many banks have started to implement processes and systems for the continuous monitoring of such communications.[33] It is important that monitoring tools are dynamic, which at least implies that the search list of words to monitor is regularly updated on the basis of new information such as newly detected conduct, incidents or media reports.

In addition, banks are currently engaged in drafting policies regarding the use of chat functions and communications. DNB and the AFM hold that given the increasing range of available media,[34] such policies should be broadened to include unethical conduct via other channels such as mobile phones and Facebook.

Good practice: Communications and transaction patterns relating to benchmarks are permanently and coherently monitored for evidence of unethical conduct.

Necessary behaviour changes

As outlined above, legislators, supervisors and institutions have already taken various actions to mitigate the risk of benchmark manipulation. However, DNB and the AFM hold that far more should still be done to curb the mode of conduct which commonly underlies benchmark manipulation.

33 In this context, multinational institutions should pay particular attention to compliance with local privacy legislation in the various jurisdictions where they are established.

34 The European Commission, for one, already includes the use of Facebook in its inquiries; see: http://www.bloomberg.com/news/2014-10-27/fx-traders-facebook-chats-said-to-be-sought-in-eu-probe.html?__hstc=243294234.9fcd1994755293d8daf5b75ca44ebf9f..1411470433303.1412692142615.1414494568574.3&__hssc=243294234.1.1414494568574&__hsfp=1084579328

It has been demonstrated that unethical activities relating to benchmarks were often due to dilution of moral standards within groups of traders and submitters. Within the financial sector, many subcultures were found to exist that encouraged or even cultivated such behaviour. Characteristically, within these subcultures:

- members of the group have known each other for some considerable time from previous employment or studies;
- members of the group maintain close informal contacts and personal relationships outside work;
- groups maintain strict exclusivity vis-à-vis outsiders and do not easily accept new members;
- groups develop their own internal (code) language used for communication between members, e.g. in chatrooms;
- groups comment in cynical terms on outsiders such as other market participants, customers and colleagues.

The recent scandals have revealed the amount of damage such group behaviour may do. Yet these kinds of subcultures are hard to eradicate. DNB and the AFM have observed that financial institutions have become more aware of conduct and culture on the work floor and of potential conflicts of interests among staff. This is a step forward, but more concrete action is required if people's behaviour is to be changed structurally.[35]

Good practice: Senior management sets the tone for minimising integrity risks on trading floors by actively promoting ethical behaviour and disciplining inappropriate behaviour.

It is very important that senior and line management acknowledge the behavioural aspects and actively address it so as to mitigate integrity risks. Therefore management should place this topic high on the agenda, pursue a clear integrity policy and secure a correct mind frame and attitude among traders and their direct managers.
This requires a comprehensive approach and cannot be achieved overnight. One useful instrument in achieving this aim is the explicit inclusion of integrity aspects as criteria for appraisal and remuneration of both staff and managers.

Good practices:

- Staff are encouraged and empowered to report possible breaches of integrity (committed by colleagues or other market participants) internally, and such reports are followed up.
- Integrity aspects are explicitly included in the drafting and implementation of performance and remuneration indicators for (groups of) traders.

35 In this context, see also http://www.afm.nl/en/professionals/nieuws/2014/okt/brochure-verandervermogen

This review has shown that institutions have strict procedures in place for the assessment of infringements by senior management. This is positive, yet in many of these cases a clear and consistent policy for the assessment and sanctioning of benchmark-related infringements is lacking. A supporting framework will help institutions to evaluate the nature, magnitude and impact of infringements more consistently and to mete out appropriate sanctions. This too can be used as an instrument in achieving the envisioned behavioural change, as it makes clear to everyone what the consequences of benchmark-related unethical conduct will be.

Good practice: Evaluation and sanctioning of breaches of integrity, such as (attempted) benchmark manipulation, is applied uniformly and followed up by appropriate disciplinary measures to prevent recurrence.

6. Limited yet material involvement of Dutch banks in FX trading

DNB and the AFM are still reviewing to which extent Dutch banks are involved in FX trading, partly following international media reports about possible FX manipulation. Although this review will not be completed until mid-2015, a number of observations can already be shared.

With respect to the FX trade, conduct supervision used to be less strict than regarding the equity trade. Because of its huge magnitude of some USD 5,300 billion per day and its high liquidity, the FX market is viewed by many as a market of perfect competition. The FX trade is characterised by its 24/7 nature, with transactions made between all sorts of FX pairs in various locations worldwide and by myriad participants, via platforms or otherwise. Yet a number of FX benchmarks are regarded as key yardsticks for the valuation of portfolios, investments etc. As mentioned earlier in this report, one of the most widely used global FX benchmarks is the 4 p.m. WM/Reuters fix.

Given the large number of suppliers and buyers of currencies, it was long assumed that exchange rate manipulation was unlikely to occur. For many years, the FX trade therefore received little attention from international supervisors.

Examples of unethical conduct

Recent international investigations and financial settlements[36] have made clear that manipulation of benchmarks and other unethical conduct do, in fact, occur in FX markets.

The examples below are not typical of the FX trading alone, but also occur in other financial markets:

- *Using or sharing confidential customer information:* if a trader knows that a customer order may influence the exchange rate, there is a risk that this knowledge may be misused for the trader's own account or shared with other traders. An example of this is 'building the fix', where traders coordinate their transactions in advance of the fix in an attempt to push it in a particular direction.
- *Front running:* acting on information received, traders may build up a pre-fix position with the aim to boost the price/profitability of a particular customer order. Front running requires a combination of, on the one hand, coordination with others and/or a high market share and on the other, a lack of counterparties that perform opposite transactions at the fix.
- *Triggering stop-loss orders:* traders having knowledge of customers' stop-loss orders may perform proprietary trades, alone or in conjunction with others, to nudge the exchange rate closer to the required stop-loss level of the customer, thus realising a margin on the deal. This only works with large transaction volumes, whether or not in combination with illiquid hours or currencies.

36 See for instance http://www.fca.org.uk/news/fca-fines-five-banks-for-fx-failings

- *Painting the tape:* traders may perform large numbers of 'fake' transactions with themselves or with colluding traders working for other participants so as to effect particular exchange rate movements.
- *Banging the close:* traders may place a large number of (non-economical) orders during the fixing window with the aim of pushing the fix in a particular direction.
- *Conflict of interests in panel benchmarks:* where exchange rates are determined by a panel of banks, as in several emerging markets, collusion and conflicts of interests may arise. Such a conflict of interests may arise, for instance, when banks act as submitters to benchmarks and also engage in FX trading themselves.

Integrity risks and risk awareness of Dutch banks in respect of the FX trade

On average, Dutch banks represent a small share in global FX trading (less than 1%). However, this does not mean that they are invulnerable to manipulation risk. This is because banks hold relatively large positions in some of the smaller currencies.
Also, under certain market conditions (such as low liquidity and/or unusually large customer orders), transactions by relatively small banks may also impact an exchange rate.

The knowledgeability and the risk awareness of Dutch banks concerning possible unethical conduct in the FX trade used to be low, but have increased in the course of this review. DNB and the AFM expect banks to take further steps to ensure that their awareness and management of the risks of manipulation and other unethical conduct for their FX-related activities is adequate. Examples of these risks include integrity risks arising from participation in panels, trading in smaller currencies (e.g. on peripheral locations) or the processing of unusually large customer transactions.

FX benchmark users think they have little power against possible exchange rate manipulation. They have the feeling they are dependent on brokers (usually banks) for the processing and the results of their transactions. Banks, on the other hand, counter that it is the users that put them under pressure to defeat the FX benchmarks. They indicate that much of the risk could be eliminated if users were more deliberate in their choice to have their transactions carried out at the benchmark or otherwise.

DNB and the AFM believe that contributors and users each carry a responsibility in mitigating integrity risks where the FX trade is concerned. The primary responsibility in this respect lies with the participants executing the orders. Yet the participants that place orders to be carried out by others, especially the users of FX benchmarks, can also act themselves to reduce the risk of manipulation.

Transactions in the FX market are increasingly being carried out in an automated way (straight through processing). In principle, this should result in lower integrity risks, since it reduces the risk of one or more traders using transactions to manipulate exchange rates. Yet, some residual risk will remain. This is why authorities are already investigating the risk of manipulation where automated systems are used.[37]

37 In this context, US authorities are for instance examining banks' algorithms for possibilities of manipulation. See also: http://uk.reuters.com/article/2014/12/11/uk-usa-banks-forex-probe-idUKKBN0JP0BI20141211

7. Manipulation risks: insufficient awareness among users

DNB and the AFM observe that many institutions have only recently begun to pay attention to the risks of using transaction-based benchmarks. They have always regarded a benchmark as a given quantity, unaware of whether the benchmarks they used could be vulnerable to manipulation. Also, institutions were found to be insufficiently aware of their own influence on transaction-based benchmarks.

DNB and the AFM are of the opinion that users need to take several measures to reduce the risk of counterparties manipulating transaction-based benchmarks. First, users need to be non-naive regarding the integrity of counterparties they do business with. Some institutions select counterparties using integrity criteria. On detecting unethical conduct, users should confront their counterparty and review the relationship. Second, users should be aware of the manner in which they place their orders with counterparties. The timing of an order may, for instance, make the user vulnerable to manipulation. For this reason, some institutions consciously place orders with several counterparties, so that each counterparty is encouraged to act solely in the interest of the customer, thus avoiding unethical conduct that may result in manipulation.

Good practice:

- Benchmark users take known unethical conduct, such as benchmark manipulation, into account when selecting counterparties and hold existing counterparties accountable when observing unethical conduct.
- When requesting transactions to be performed on a benchmark, users observe due care in deciding what information is provided when to which counterparty or counterparties.

Annex

Benchmark: the European Market Abuse Regulation defines a benchmark as any rate, index or figure, made available to the public or published that is periodically or regularly determined by the application of a formula to, or on the basis of the value of one or more underlying assets or prices, including estimated prices, actual or estimated interest rates or other values, or surveys, and by reference to which the amount payable under a financial instrument or the value of a financial instrument is determined.

Euribor: the Euro Interbank Offered Rate, determined on the basis of contributions by a selected panel of banks of the rates they expect to pay on loans with maturities ranging from one week to one year. Strictly speaking, this means there are not one but eight Euribor rates. Euribor is set each working day at 11:00 hours CET by the European Money Markets Institute (EMMI).

Libor: the London Interbank Offered Rate is the average reference rate at which a selection of banks in the London money market will extend loans with a particular maturity to each other. Libor is based on contributions by a selected panel of banks of the rates they expect to pay on loans with maturities ranging from one week to one year. The rate is determined for ten currencies by ICE Benchmark Administration Limited.

Eonia: the Euro OverNight Index Average is the average rate at which a selection of European banks will lend money to each other with a maturity of one night. Thus Eonia may be regarded as the overnight Euribor. Eonia is administered by EMMI, supported for the daily calculation by the European Central Bank (ECB).

Ronia: the Repurchase OverNight Index Average is a benchmark based on the weighted average of all secured sterling overnight transactions of a number of selected participants in London between 00:00 and 16:15 hours London time.

Sonia: the Sterling OverNight Index Average is a benchmark based on the weighted average of all unsecured sterling overnight transactions of a number of selected participants in London between 00:00 and 16:15 hours London time.

4 p.m. WM/Reuters fix: this benchmark is derived for every FX pair separately from the transactions in each pair carried out within one minute – from 4 p.m. minus to 4 p.m. plus 30 seconds – via electronic trading platforms. Shortly thereafter, the exchange rate for each FX pair is published. WM/Reuters determines fixes for some 160 FX pairs.

1:15 p.m. ECB fix: this FX benchmark is determined daily on the basis of consultations among euro area and non-euro area central banks.

FX spot: an agreement between two participants to trade an amount in one FX against another FX at an agreed price, with undelayed settlement ('on the spot').

Non-deliverable forward (NDF): a special type of forward with cash settlement consisting only of the difference between the NDF rate and the fixed reference rate. This instrument is frequently used in emerging countries.

ISDAfix: this benchmark, that takes its name from the International Swaps and Derivatives Association (ISDA), is used worldwide to calculate the prices of interest rate swaps on the basis of transaction data. The rate is of importance for e.g. participants that wish to cover risks and participants that invest in bond derivatives.

London Gold Fix: this benchmark, used to determine the price of gold products and derivatives, is based on contributions from a small panel of banks. The fix is published daily at 10:30 and 15:00 hours London time in US dollar, pound sterling and euro.

LBMA Silver Fix: a benchmark on which the price of silver is based. The benchmark is fixed once daily on the basis of contributions by a few participants selected by the London Bullion Market Association (LBMA).

ICE Brent Index: a benchmark representing the average trading price on the 25-day Brent Blend, Forties, Oseberg, Ekofisk (BFOE) market during a particular month.

ROZ/IPD index: a real estate index administered by the Real Estate Board of the Netherlands (*Raad voor Onroerende Zaken – ROZ*) in cooperation with the Investment Property Database (IPD) that provides information on average quarterly and annual returns on various types of real estate objects on the basis of data contributed by investment funds and appraisers.