

Investment banks' revenue from food speculation 2010-2012

Summary

Based on the calculations below, we estimate that in the three years 2010 to 2012, the top five banks involved in food speculation – Barclays, Deutsche Bank, Goldman Sachs, JP Morgan and Morgan Stanley – made around £2.2bn from trading food commodity contracts. This figure is an estimate based on a number of assumptions and using two different methodologies and the actual figure could be higher.

1. A sector-wide approach using overall industry estimates

The simplest approach taken by this analysis was to consider estimates for the overall revenue generated by investment banks from commodities between 2010 and 2012.

Estimates for commodities revenue in 2012 varies between \$6bn¹ and \$11bn², around \$8bn³ in 2011, and \$6-7bn⁴ in 2010.

According to analysis from Reuters in November 2012 “The five banks control 70 per cent of the commodities trading pot with the rest split between mid-sized players such as Credit Suisse and Bank of America/Merrill Lynch”⁵.

Based on this estimate, with commodities revenues at around \$6.5bn in 2010, and \$8bn in 2011 and \$8.5bn in 2012, it is reasonable to assume that the top five investment banks made around \$4.55bn from commodities in 2010, \$5.60bn in 2011 and \$5.95bn in 2012.

To estimate the proportion of this revenue accounted for specifically by trading in agricultural commodities, we analysed four major commodity indices which demonstrates the relative importance of different commodity types.

Table 1: Breakdown of commodity types in main commodity indices

% of index	S&P GSCI	Dow Jones UBS	Rogers	Thomson Reuters/ Jefferies CRB	Average
Non-agricultural (energy, metals)	80.0	64.1	65.1	59.0	67.1
Agricultural (includes non-food e.g. cotton, coffee)	20.0	35.9	34.9	41.0	33.0
of which food	17.8	31.7	25.7	26.0	25.3

¹ Kolesnikova, M., Chanjaroen, C., McFerron, W. (2013) Goldman ranker no.1 in commodities in 2012, JPMorgan second. *Bloomberg*. 14/03/13

² Blas, J. (2013) Goldman's commodities risk taking falls. *The Financial Times*. 17/01/13

³ Blas, J., Farchy, J. (2012) BarCap hit in commodities trading jostle. *The Financial Times*. 20/03/2012

⁴ Paulsson, L. (2011) Goldman appoints Agran, Shenouda as global co-heads of commodities trading. *Bloomberg*. 21/10/11

⁵ Zhdannikov, D. (2012) Insight: Banks struggle to adapt or survive in commodities. *Reuters*. 05/11/12

On average, this suggests that food commodities account for roughly 25 per cent of commodities markets, so it is reasonable to estimate that they also account for roughly this proportion of overall commodities revenues.

However, several of the top five players (most notably Goldman Sachs, JP Morgan and Barclays) are widely recognised to be more dominant in metals and/or energy commodities, so in these estimates we have used a more conservative figure of 20 per cent.

On this basis, the top five banks would have made roughly the following, totalling around \$3.2bn (£2bn)⁶ over the three year period 2010-2012.

Table 2: Estimated total commodity revenues 2010-2012

	2010	2011	2012	Total 2010-2012
Estimated total commodities revenue (\$bn)	6.5	8.0	8.5	23.0
Estimated total food commodities revenue (\$bn)	1.63	2.00	2.13	5.76
Estimated commodities revenues of top five banks (\$bn)	4.55	5.60	5.95	16.10
Estimated food commodities revenues of top five (\$bn)	0.91	1.12	1.19	3.22

2. Analysing the individual banks' revenues

In addition, we also made estimates of the amount each of the top five banks made individually from their food commodity derivative trading activities.

The starting point for the estimate for each bank is their published figures for FICC (fixed income, currency and commodities) or equivalent revenues – these are found in their annual report and/or US Securities and Exchange Commission 10-k filings (submission of annual figures to the US regulator). We assume that commodity revenue is found within this figure, although it is possible that additional commodity-related revenue may be accounted for in other divisions, such as investment management.

These figures are summarised in table 3 below.

Table 3: Revenues from fixed income, currency and commodities (FICC)

	2010	2011	2012
Goldman Sachs (\$m)	13707	9018	9914
Morgan Stanley (\$m)	5900	7507	2358
Barclays (£m)	8687	6325	7403
JP Morgan (\$m)	15025	14784	15412
Deutsche Bank (€m)	9181	8579	9181

We then estimated the percentage of the FICC revenues accounted for by commodities, using published VAR (value at risk) as a proxy for revenues.

⁶ Based on the following conversion rates: 2010 - US\$1=£0.648=€0.766; 2011 - US\$1=£0.620=€0.721; 2012 - \$US\$1=£0.632=€0.786 (source: xe.com)

VAR figures reflect the amount of risk taken on by the bank, and they break it down into interest rate risk, credit spread risk, currency risk, equity price risk and commodity price risk. Under the assumption that amount of risk taken is roughly correlated to return expected, these figures are a rough yardstick to assess how much revenue is associated with a particular area. This methodology has also been used by Javier Blas at the Financial Times wrote in January 2013: “Daily VAR is a common industry yardstick used to measure potential losses, and also one of the few publicly available indicators of commodity trading within the banking industry. Wall Street banks do not usually publish their commodities revenue or profits.”⁷

Taking the total VAR for FICC, and calculating what percentage of this is accounted for by commodities gives a value that can be used to estimate the percentage of FICC revenues from commodities. These values are summarised in table 4 below.

We also took into account the following considerations:

- Reuters has taken data from **Morgan Stanley**'s annual reports and used it to trace a rough trajectory of the bank's commodity revenues over recent the years.⁸ These estimates, and those by other analysts which put the bank's commodity revenues at around \$1.5bn in 2011,⁹ suggest that our calculations are reasonable. Morgan Stanley's 2012 Q4 results state that “commodities results declined meaningfully in a challenging market”¹⁰, and our estimates are accordingly lower.
- In addition to commodity derivative trading, **JP Morgan** also has a physical trading business (acquired when the bank bought Sempra in 2010). For this reason, we (along with other analysts) assume that not all their reported commodity revenues are from commodity derivative trading and revising these estimates down to a maximum of 15 (rather than 20) per cent of FICC revenues stemming from commodity derivative trading.) JP Morgan has become a significant player in commodities relatively recently, beginning their operation with metal and energy commodities rather than agriculture, so we also assume that their revenues from agricultural commodities were lower in 2010 (adjusted below).
- **Deutsche Bank** were relatively new to commodity trading in 2010, and in 2012 said they were suspending the release of new exchange-traded products involving agriculture (some of which would also have included other types of commodity), so we have also used a lower proportion in these estimates.

⁷ Blas, J. (2013) Goldman's commodities risk taking falls. *The Financial Times*. 17/01/13

⁸ Leff, J., Sheppard, D. (2012) Exclusive: JPMorgan trumped competitors in commodities last year. *Reuters*. 02/03/12

⁹ Deutsche Bank (2013) *Euromoney awards for excellence 2012*. Deutsche Bank. Frankfurt; Blas, J., Farchy, J. (2012) BarCap hit in commodities trading jostle. *The Financial Times*. 20/03/2012

¹⁰ Morgan Stanley (2013) *Morgan Stanley reports fourth quarter and full year 2012*. Morgan Stanley. New York

Table 4: Commodities VAR as a percentage of total FICC VAR

%	2010	2011	2012	Range used for estimate
Goldman Sachs	20.9	21.9	19.3	15-25%
Morgan Stanley	17.9	22.4	25.8	15-25%
Barclays	15.5	15.2	12.2	5-15%
JP Morgan	17.4	20.8	13.9	10-15%
Deutsche Bank	10.4	12.1	20.0	5-15%

(All VAR figures are one day 95% averages; except Deutsche Bank for which only 99% figures are available)

Taking into account the ranges in table 4 and the considerations above, we produced the range of estimates for the banks' revenues from commodity trading shown in table 5. In the case of Goldman Sachs, we have substituted the range identified with specific figures reported for commodity revenues from the bank's 10-K filings to the US Securities and Exchange Commission (SEC).

Table 5: Estimated revenues from commodity derivative trading (ranges)

	2010		2011		2012	
	min	max	min	max	min	max
Goldman Sachs (\$m)		1567 ¹¹		1588		575
Morgan Stanley (\$m)	885	1475	1126	1877	354	590
Barclays (£m)	434	1303	316	949	370	1110
JP Morgan (\$m)	1503	2254	1478	2218	1541	2312
Deutsche Bank (€m)	496	1489	429	1287	459	1377

In line with the analysis of the relative importance of different commodities in table 1 above and the recognition that Goldman Sachs, JP Morgan and Barclays are known to be more dominant in energy and/or metals rather than agricultural commodities, we have assumed that around 20 per cent of commodity revenues of the top five banks is from food commodities. Barclays announced in early 2013 that they would no longer trade in agricultural commodities for speculative purposes, but we have assumed that revenues for 2010-2012 were unaffected.

Taking the estimates for overall commodity revenues with the estimates for the relative dominance of food commodities together produces the range of estimates in table 6.

¹¹ Reported commodity revenue figures taken from Goldman Sachs (2013) *Form 10-K*. United States Securities and Exchange Commission. Washington D.C.

Table 6: Estimated revenues from food commodity derivative trading (ranges)

	2010		2011		2012	
	min	max	min	max	min	max
Goldman Sachs (\$m)		313		318		115
Morgan Stanley (\$m)	177	295	225	375	71	118
Barclays (£m)	87	261	63	190	74	222
JP Morgan (\$m)	150	250 ¹²	296	444	308	462
Deutsche Bank (€m)	99	298	86	257	92	275

Taking averages of these figures, and making currency conversions, we consider that the figures in table 7 constitute a reasonable estimate of the individual banks revenues from food commodities.

Table 7: Estimated revenues from food commodity derivative trading

	2010	2011	2012	Total 2010-2012
Goldman Sachs (\$m)	300	300	100	700
Morgan Stanley (\$m)	250	300	100	650
Barclays (\$m)	270	200	240	710
JP Morgan (\$m)	200	330	350	880
Deutsche Bank (\$m)	260	240	220	720
Total (\$m)	1280	1370	1010	3660
Total (£m)¹³	830	850	640	2310

This methodology puts total revenues from the top five banks at an estimated £2.3bn over the three years 2010-2012.

The two methodologies used in our estimates produce relatively close results. While there is some divergence, we consider that a conservative estimate for the top five banks' revenues from trading food commodity derivatives over the period 2010-2012 is £2bn, with the figure possibly being as high as £2.3bn, with the likely actual figure a compromise between the two, in the region of £2.2bn.

¹² Estimate reduced to reflect JP Morgan started their commodities business with energy and metals, rather than agriculture.

¹³ Based on the following conversion rates: 2010 - US\$1=£0.648=€0.766; 2011 - US\$1=£0.620=€0.721; 2012 - \$US\$1=£0.632=€0.786 (source: xe.com)