

WOMEN IN INDUSTRY

C&EN's annual survey finds an influx of women at the top of **CHEMICAL FIRMS**, but equality is far off

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WOMEN HAVE MADE relatively big gains in the chemical business recently, with more women serving as directors and as corporate officers at chemical companies than just a year ago. But these gains revealed by C&EN's annual survey of women in industry management do not mask the reality that women still have not achieved anything resembling equality.

Nonetheless, the increases in women in top positions revealed in the survey bring female representation in the chemical industry close to levels seen in the corporate world at large.

Of the 407 board of director positions that exist at 42 public chemical firms, 14.5% are held by women, according

to the C&EN survey. Given the general stability of chemical firm boards from year to year, this can be considered a sharp increase from the 13.6% share C&EN found in 2012.

Similarly, the number of women serving as executive officers, also an area of little turnover, increased significantly since 2012. Of the 406 executive officers, 11.1% are women, up from 9.9% a year earlier.

To compile the annual survey, C&EN consults company annual reports as well as proxy statements and 10-K forms filed with the Securities & Exchange Commission by publicly traded U.S. companies that have significant chemical businesses.

Short biographies of directors are printed in company proxy statements. C&EN counts directors who were serving up to the time of the most recent annual meeting, not those who were voted in at the meeting. This ensures that the executive officers and the directors captured in the survey served simultaneously.

C&EN tries to survey the same 42 firms

each year, but mergers and acquisitions make that impossible. When a company is acquired or taken private and no longer files the relevant SEC documents, C&EN replaces the company with a similar firm and then revises prior-year data accordingly so it can make two-year comparisons.

This year brought only two changes. Quaker Chemical replaces specialty chemical maker Solutia,

which was purchased by Eastman Chemical. Axial is the new name for Georgia Gulf, after its merger with PPG Industries' chlor-alkali business.

The fact that the progress of women in the chemical industry tracks that of the larger corporate world is supported by data

from Catalyst, a New York City-based organization dedicated to advancing women in the workplace. Catalyst conducts its own survey of women working at Fortune 500 companies using the same methodology as C&EN. In its most recent study, released in December 2012, Catalyst found that 16.6% of the 5,488 directors at Fortune 500 companies were women, up from 16.1% reported in 2011.

Catalyst also found that 14.3% of the 5,005 executive officers at Fortune 500 companies were women, a small increase from 14.1% the year before.

This year also saw strong advances for women on the topmost rungs of the chemical corporate ladder. Whereas Karyn F. Ovelmen of LyondellBasell Industries was the only female chief financial officer last year, four chemical firms now have women serving as CFOs.

During the past year, Occidental Petroleum appointed Cynthia L. Walker, who had been a managing director at Goldman Sachs,

as CFO. Quaker Chemical named Margaret M. Loebel as its finance chief—she had consulted for Constellation, an aluminum products maker. And Sigma-Aldrich made Jan Bertsch, formerly controller and principal accounting officer at BorgWarner, its CFO.

There is still only one female chemical company chief executive officer, DuPont's Ellen J. Kullman.

The responsibilities women have as executive officers at chemical firms have shifted over the past year. Perhaps owing to the new CFOs, the number of women serving in financial positions—as opposed to marketing or public relations—increased from 14% last year to 20% this year. Women with strategic responsibility for chemical businesses increased from 22% to 25%.

Human resources still represents the dominant role for women executives. Some 31% of the women serving as executive officers at chemical companies head human resources departments, down slightly from a year earlier.

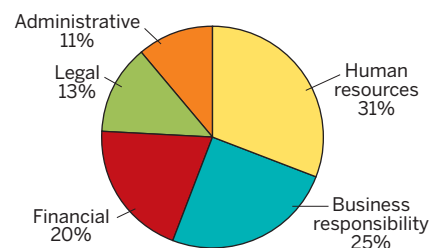
WOMEN'S REPRESENTATION in business ought to be improving. According to the National Science Foundation, industry can draw on a rich pipeline of women training to work in science and engineering. For the past 10 years, women have received about half of the bachelor's degrees awarded in science and engineering, including social sciences and psychology. A science or engineering degree is a significant track into the chemical business.

Judith C. Giordan, former chief technology officer of International Flavors & Fragrances and cofounder of the Chemical Angel Network, which invests in early-stage start-up firms in the chemical sciences, says she has identified an obstacle for women in these fields and, for that matter, for scientists in general. She says they are too reserved in talking about their accomplishments and thus rarely gain the clout held by marketing and sales people.

"We are not the ones who will jump up and down," Giordan tells C&EN. "We are trained to publish and give talks. That is how you get your point across."

Giordan says women may be less inclined to take credit than male scientists because they are afraid of coming off as aggressive or are hesitant to speak unless they have data that back them up. "It is false modesty," Giordan says. "If you have the solution to the problem and you don't open your mouth about it, whose fault is it that the problem wasn't solved?" ■

GENDER ROLES Human resources is the dominant role for female executives in the chemical industry.



Women in executive positions in 2013 = 45

NOTE: Data are based on the companies listed on page 19.

WHERE WOMEN HAVE CLOUT

Women posted gains on boards of directors and as executives

| COMPANY | 2012 CHEMICAL SALES (\$ MILLIONS) | BOARD OF DIRECTORS | | WOMEN | | EXECUTIVE OFFICERS | | FUNCTION |
|---------------------------|---|-----------------------|------------|----------|----------|-----------------------|------------|--|
| | | WOMEN | TOTAL | CEO | CFO | WOMEN | TOTAL | |
| Air Products & Chemicals | \$9,192 | 3 | 11 | 0 | 0 | 0 | 8 | |
| Albemarle | 2,745 | 2 | 10 | 0 | 0 | 4 | 14 | Senior VP, general counsel & corporate secretary; senior VP, HR; VP, deputy general counsel, chief compliance officer & assistant corporate secretary; VP, catalysts |
| Ashland | 6,172 | 2 | 11 | 0 | 0 | 2 | 11 | VP, chief HR & communications officer; VP, chief information & administrative services officer |
| Axiall | 2,685 | 1 | 11 | 0 | 0 | 0 | 6 | |
| Cabot | 3,300 | 2 | 13 | 0 | 0 | 0 | 5 | |
| Cambrex | 278 | 2 | 9 | 0 | 0 | 0 | 6 | |
| Celanese | 6,418 | 1 | 10 | 0 | 0 | 1 | 8 | Senior VP, HR |
| CF Industries | 6,104 | 0 | 8 | 0 | 0 | 1 | 7 | Senior VP, HR |
| Chemtura | 2,629 | 1 | 9 | 0 | 0 | 1 | 7 | Senior VP, general counsel & secretary |
| Cytec Industries | 1,708 | 2 | 10 | 0 | 0 | 1 | 8 | VP, HR |
| Dow Chemical | 56,786 | 2 | 11 | 0 | 0 | 1 | 13 | Exec. VP & president of manufacturing & engineering, supply chain & environmental health & safety |
| DuPont | 30,216 | 3 | 11 | 1 | 0 | 1 | 7 | CEO |
| Eastman Chemical | 8,102 | 2 | 12 | 0 | 0 | 0 | 10 | |
| Ecolab | 5,161 | 3 | 14 | 0 | 0 | 1 | 14 | Exec. VP & president, global food & beverage |
| ExxonMobil | 38,726 | 2 | 12 | 0 | 0 | 0 | 19 | |
| Ferro | 1,769 | 2 | 9 | 0 | 0 | 1 | 4 | VP, HR |
| FMC Corp. | 3,748 | 0 | 10 | 0 | 0 | 1 | 8 | Exec. VP, general counsel & secretary |
| H.B. Fuller | 1,886 | 0 | 8 | 0 | 0 | 2 | 9 | VP, Americas adhesives; VP, HR |
| Goodyear | 1,260 | 2 | 12 | 0 | 0 | 0 | 12 | |
| W.R. Grace | 3,156 | 2 | 9 | 0 | 0 | 1 | 6 | VP, chief HR officer |
| Honeywell | 6,184 | 3 | 12 | 0 | 0 | 1 | 9 | Senior VP & general counsel |
| Huntsman Corp. | 11,187 | 1 | 10 | 0 | 0 | 1 | 19 | VP & chief information officer |
| Innophos | 862 | 2 | 7 | 0 | 0 | 3 | 14 | VP, purchasing, logistics & distribution; VP, HR; VP, quality & regulatory |
| Innospec | 776 | 0 | 7 | 0 | 0 | 1 | 7 | Senior VP, HR |
| Koppers | 1,106 | 2 | 8 | 0 | 0 | 2 | 14 | VP, safety & environmental affairs; treasurer |
| Kronos Worldwide | 1,976 | 0 | 7 | 0 | 0 | 2 | 16 | VP, corporate strategy & investor relations; VP & global tax director |
| LyondellBasell Industries | 32,847 | 0 | 11 | 0 | 1 | 4 | 16 | Exec. VP & CFO; senior VP, manufacturing; VP & chief accounting officer; senior VP & chief HR officer |
| Monsanto | 3,715 | 3 | 11 | 0 | 0 | 3 | 12 | Senior VP, chief of staff & community relations; VP, global vegetable & Asia commercial; VP & controller |
| Mosaic | 11,108 | 2 | 11 | 0 | 0 | 1 | 9 | VP, HR |
| NewMarket | 2,212 | 1 | 7 | 0 | 0 | 0 | 8 | |
| Occidental Petroleum | 4,580 | 2 | 11 | 0 | 1 | 1 | 11 | Exec. VP & CFO |
| Olin | 1,411 | 0 | 9 | 0 | 0 | 1 | 12 | VP, HR |
| OM Group | 865 | 1 | 7 | 0 | 0 | 1 | 6 | VP, general counsel & secretary |
| Omnova | 864 | 0 | 8 | 0 | 0 | 0 | 7 | |
| PPG Industries | 14,168 | 2 | 12 | 0 | 0 | 1 | 7 | Senior VP, automotive coatings |
| Praxair | 11,224 | 2 | 11 | 0 | 0 | 2 | 9 | VP & controller; VP, HR |
| Quaker Chemical | 708 | 1 | 10 | 0 | 1 | 1 | 10 | VP, CFO & treasurer |
| Rockwood Specialties | 2,819 | 1 | 5 | 0 | 0 | 0 | 3 | |
| Sigma-Aldrich | 1,574 | 1 | 10 | 0 | 1 | 2 | 9 | Exec. VP, CFO & treasurer; senior VP, corporate development & communications |
| Stepan | 1,804 | 0 | 7 | 0 | 0 | 0 | 9 | |
| Tronox | 1,832 | 0 | 9 | 0 | 0 | 0 | 6 | |
| Westlake Chemical | 3,571 | 1 | 7 | 0 | 0 | 0 | 11 | |
| TOTAL | | 59 | 407 | 1 | 4 | 45 | 406 | |

| | | |
|--|-------------|-------------|
| | 2012 | 2013 |
| WOMEN DIRECTORS PER COMPANY | 1.3 | 1.4 |
| WOMEN DIRECTORS AS % OF BOARD POSITIONS | 13.6 | 14.5 |
| WOMEN EXECS PER COMPANY | 1.0 | 1.1 |
| WOMEN EXECS AS % OF POSITIONS | 9.9 | 11.1 |

CEO = chief executive officer. CFO = chief financial officer. HR = human resources. VP = vice president. SOURCE: Company documents