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Research **Institute**

Thought leadership from Credit Suisse Research and the world's foremost experts

Gender diversity and corporate performance

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Editorial

There has been considerable research on the impact of gender diversity on business. This report addresses one key question: does gender diversity within corporate management improve performance? While it is difficult to demonstrate definitive proof, no one can argue that the results in this report are not striking. In testing the performance of 2,360 companies globally over the last six years, our analysis shows that it would on average have been better to have invested in corporates with women on their management boards than in those without. We also find that companies with one or more women on the board have delivered higher average returns on equity, lower gearing, better average growth and higher price/book value multiples over the course of the last six years.

There is not one easy answer to why gender diversity matters. While the facts and data we present are objective, the interpretation of the results carries more than an element of subjectivity. We analyzed the academic literature in this area and conducted several interviews with several experts on the topic. Among these, we want to thank Professor Katherine Phillips (Paul Calello Professor of Leadership and Ethics at Columbia Business School) and Professor Iris Bohnet (Academic Dean and Professor of Public Policy at the Harvard Kennedy School and now a Director on the Credit Suisse Group Board). With their help, we identified seven possible explanations that, on a stand-alone basis or in some combination, help explain our findings.

What is next? Several public bodies have become more vocal in supporting increased participation of women in leadership roles in the corporate world. Some, like the Norwegian government, have set mandatory targets; others have chosen to issue recommendations on board diversity. Ultimately, the trend towards greater gender diversity within management looks set to continue – and going forward will provide another metric for those scrutinizing corporate governance. Our research suggests that a specific consequence of greater board diversity for shareholders is one of reduced volatility – manifested as enhanced stability in corporate performance and in share price returns.

Urs Rohner
Chairman of the
Board of Directors

Brady W. Dougan
Chief Executive Officer

Gender diversity and corporate leadership

The impact of gender diversity on corporate leadership has been widely debated for many years. In our review of the topic, we look at the impact from a global perspective by analyzing the performance of close to 2,400 companies with and without women board members from 2005 onward.

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Introduction

Gender diversity within senior management teams has become an increasingly topical issue for three related reasons. First, although the proportion of women at board level generally remains very low, it is changing. Based on our numbers, only 41% of MSCI ACWI stocks had any women on their boards at the end of 2005, but this had increased to 59% by the end of 2011. Second, government intervention in this area has increased. In the past five years, seven countries have passed legislation mandating female board representation and eight have set non-mandatory targets. Third – and most interesting – the debate around the topic has shifted from an issue of fairness and equality to a question of superior performance. If gender diversity on the board implies a greater probability of corporate success, then it would make sense to pursue such an objective, regardless of government directives.

There is a significant body of literature on this issue; articles on the subject span several decades. Some suggest corporate performance benefits from greater gender diversity at board level, while others suggest not.

In the positive camp are the likes of McKinsey and Catalyst. Catalyst has shown that Fortune 500 companies with more women on their boards tend to be more profitable. McKinsey showed that companies with a higher proportion of women at board level typically exhibited a higher degree of organization, above-average operating margins and higher valuations.

Other studies, such as those conducted by Adams and Ferreira or Farrell and Hersch, have shown that there is no causation between greater gender diversity and improved profitability and stock price performance. Instead, the appointment of more women to the board may be a signal that the company is already doing well, rather than being a sign of better things to come.

We note that much of the available literature analyzes the impact of women on the board within one market or region. Usually, this is the USA or Europe or another isolated market. Hence, to add to the debate, we consider the issue from a global perspective, looking at the impact on performance through time, both in terms of stock returns and commonly quoted financial metrics (ROE, EPS growth, gearing and P/BV). Studying the data over time, and encompassing periods of relative bull and bear markets, provides an opportunity to assess the conditions under which female influence on leadership may deliver the best performance and highlights periods in which gender diversity on the board may be less useful.

Specifically, in our study we set out to answer four broad questions:

1. What evidence is there to support the theory that stock-market performance is enhanced by having a greater number of women on the board?
2. Is there any difference in the financial characteristics of companies with a greater number of women on the board?
3. Why might it make a difference (better or worse) to have some gender diversity in company management?
4. What factors might limit companies in increasing female representation?

Some of the answers are obvious, some are less so. For example, the extent to which subconscious stereotyping can bias the selection process.

Our key finding is that, in a like-for-like comparison, companies with at least one woman on the board would have outperformed in terms of share price performance, those with no women on the board over the course of the past six years. However, there is a clear split between relative performance in the 2005–07 period and performance post-2008. In the middle of the decade when economic growth was relatively robust, there was little difference in share price performance between companies with or without women on the board. Almost all of the outperformance in our backtest was delivered post-2008, since the macro environment deteriorated and volatility increased. In other words, stocks with greater gender diversity on their boards generally look defensive: they tend to perform best when markets are falling, deliver higher average ROEs through the cycle, exhibit less volatility in earnings and typically have lower gearing ratios.

We can therefore conclude that relative share price outperformance of companies with women on the board looks unlikely to be entirely consistent, but the evidence suggests that more balance on the board brings less volatility and more balance through the cycle.

Gender diversity: Latest data and recent trends

To assess the impact of female board representation, we have compiled a database of the current constituents of the MSCI AC World index detailing how many women were on the board of each constituent company at the end of each year since 2005. This encompasses data for 2,360 companies and over 14,000 data points.

Our key summary observations from this set of data are:

1. Sectors that are **closer to final consumer demand** have a higher proportion of women on the board. Sectors closer to the bottom of the supply chain tend to have a much lower proportion of women on the board.
2. **Certain regions** (e.g. Europe) and countries (e.g. Norway) tend to have relatively high ratios of women on the board, for others the numbers are extremely low (e.g. Korea).
3. **Larger companies** are much more likely to have women on the board than smaller companies.
4. Over the past six years, the **fastest rates of change** in female representation have come from European companies.

In Figure 1 we detail the proportion of companies within each sector that have zero, one, two or three or more women on the board. Broadly speaking, sectors that are closer to final consumer demand (for example, Healthcare and Financials) have a higher proportion of women at board level. Heavy industry and Information Technology (IT) have a much lower proportion of women board members. More than 50% of the IT and Materials companies in our sample universe have no women on the board.

The dispersion in female representation is more significant at market and regional level than at sector level. As we illustrate in Figure 2, 72% of the companies listed in Emerging Asia, within our sample, have no women on their boards compared to only 16% of the companies listed in North America. The picture is amplified if we consider greater degrees of gender diversity. For instance, there is a greater proportion of European companies with three or more female board members (27.6%) than there are European companies with no women on the board (16.3%). Meanwhile in Asia and Latin America, the number of companies with three or more women on the board is insignificant.

Many of these differences reflect local legislation. Various European governments have set mandatory or non-mandatory targets for female board representation over the past five years and this has driven the numbers for the region to higher levels. We look at this issue in more detail on page 25.

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Figure 1

Proportion of companies in each sector split by number of women on the board (end-2011)

Source: Credit Suisse

	Number of women on the board				
% in each sector	0	1	2	>=3	Total
Healthcare	26.7	35.1	24.4	13.7	100
Financials	32.2	27.3	23.1	17.4	100
Utilities	33.1	19.5	29.3	18.0	100
Consumer Discretionary	37.7	27.2	20.2	14.9	100
Consumer Staples	38.5	15.5	23.5	22.5	100
Telecommunication Services	40.0	21.1	21.1	17.9	100
Energy	46.8	28.1	18.1	7.0	100
Industrials	48.4	24.3	17.2	10.1	100
Materials	52.5	22.1	16.7	8.7	100
Information Technology	52.5	26.3	13.8	7.4	100
Total	**41.2**	**25.0**	**20.3**	**13.6**	**100**

Figure 2

Proportion of companies in each region split by number of women on the board (end-2011)

Source: Credit Suisse

	Number of women on the board				
% in each region	0	1	2	>=3	Total
North America	15.8	32.4	33.1	18.7	100
Europe	16.3	27.4	28.7	27.6	100
EMEA	34.7	26.0	20.0	19.3	100
Latin America	60.8	28.0	8.8	2.4	100
Developed Asia	68.0	19.8	9.4	2.8	100
Emerging Asia	72.1	15.8	7.3	4.8	100

Figure 3

Average market cap (USD m) in each sector split by number of women on the board

Source: Credit Suisse

	Number of women on the board			
USD m	0	1	2	>=3
Consumer Discretionary	8,451	13,105	11,941	17,437
Consumer Staples	10,320	7,196	21,984	38,790
Energy	14,018	27,948	29,461	33,004
Financials	6,586	10,586	15,282	23,382
Healthcare	6,282	12,649	24,497	55,127
Industrials	5,649	9,363	13,537	18,512
Information Technology	7,893	23,859	24,949	47,985
Materials	7,205	9,987	13,798	15,186
Telecommunication Services	14,462	7,977	31,734	32,698
Utilities	7,561	8,507	12,743	12,954
Total	**8,100**	**13,211**	**17,730**	**26,506**

Figure 4

Proportion of companies with one or more women on the board (end-2005 vs. end-2011) by sector

Source: Credit Suisse

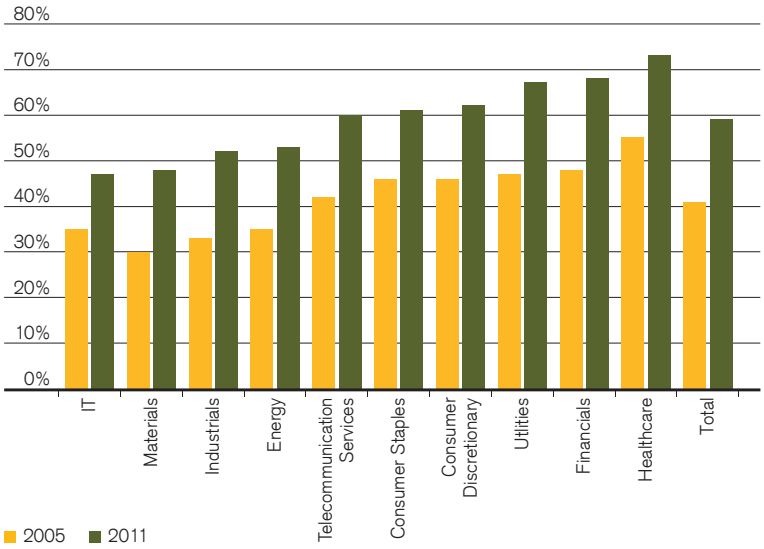
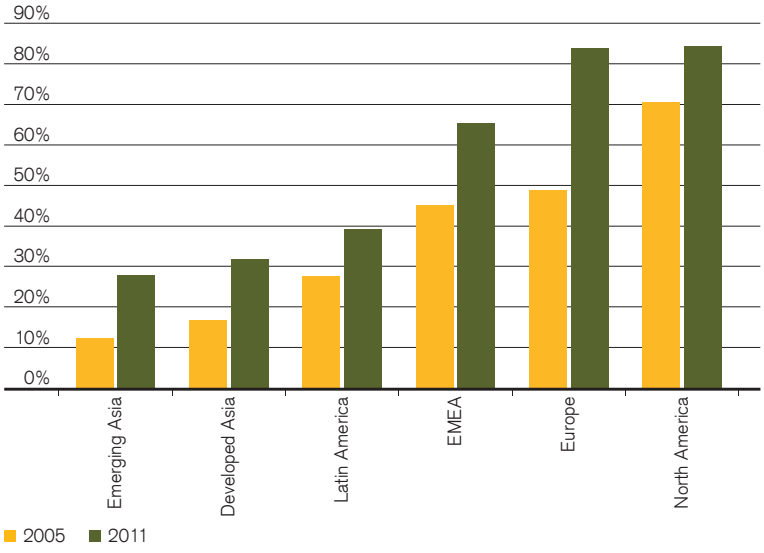


Figure 5

Proportion of companies with one or more women on the board (end-2005 vs. end-2011) by region

Source: Credit Suisse



We also note that the number of women on the board typically rises with the size of the company. On average, it is the large cap, and higher profile companies that have added women at senior management level. This holds true whether we categorize the universe by sector or region. In Figure 3 we present the data aggregated by sector. On average, companies with three or more women on the board have a market capitalization three times greater than that of companies with no women board members.

The picture is changing, however. Looking at the data over the years we can see a clear trend towards greater female board representation. At the sector level, the increase has been relatively uniform over the past six years. However, we note that the slowest rate of change has been in the Asian-dominated IT sector (there was only a 12 percentage point increase in IT companies promoting women to the board for the first time between 2005 and 2011). Utilities and Financials have delivered higher than average female board appointments: there was a 20 percentage point increase in companies within each sector promoting at least one woman to the board over the past six years.

At the regional level, the fastest rate of change over the past six years has been for European companies: just under 50% of European companies in our sample universe had one or more women on the board at the end of 2005, but by the end of 2011 this had increased to close to 84%. Asian markets (both emerging and developed) have most obviously lagged the trends in Europe.

The breakdown of the regional data into the component markets (Figure 6) illustrates the degree to which national cultures (and policies) influence the picture. The data suggest the Scandinavian markets (where mandatory and non-mandatory targets have been set) have the highest degree of female representation at board level. Female board representation looks low in Switzerland and Italy, compared with the other major European markets. Spain has seen the greatest improvement over the past six years: in 2005 only 22% of Spanish companies in the sample had one or more women at board level; by the end of 2011 this had increased to 89%. Within Australasia, female board representation is particularly low in Korea, Taiwan and Japan but much higher in New Zealand, Australia and Thailand. According to our numbers, China has seen the greatest improvement over the past six years: only 6.5% of companies had any gender diversity at board level in 2005, but this had increased to 50% by the end of 2011.

Within the EEMEA markets, Israel and South Africa stand out on the gender diversity front: well over 90% of companies in our universe in both markets have at least one woman on the board.

Figure 6

Proportion of companies with one or more women on the board (end-2005 vs. end-2011) by market

Source: Credit Suisse

		% with 1 or more women on the board		% change	Number of companies
		2005	2011	2011 vs. 2005	in the sample
Developed Asia	Australia	60.9	88.2	27.3	68
	Hong Kong	28.8	51.6	22.9	93
	Japan	2.9	11.2	8.3	312
	New Zealand	80.0	100.0	20.0	5
	Singapore	25.0	48.4	23.4	31
Emerging Asia	China	6.5	50.0	43.5	58
	India	30.4	46.5	16.0	71
	Indonesia	8.3	24.0	15.7	25
	Malaysia	4.3	42.9	38.5	42
	Philippines	58.8	38.9	-19.9	18
	South Korea	0.0	3.8	3.8	105
	Taiwan	4.3	9.2	4.9	98
	Thailand	44.4	80.0	35.6	20
Europe	Austria	25.0	50.0	25.0	8
	Belgium	25.0	83.3	58.3	12
	Denmark	50.0	91.7	41.7	12
	Finland	80.0	100.0	20.0	15
	France	47.8	97.1	49.3	70
	Germany	34.0	86.0	52.0	50
	Greece	25.0	75.0	50.0	4
	Ireland	33.3	33.3	0.0	3
	Italy	10.7	57.1	46.4	28
	Luxembourg	33.3	66.7	33.3	3
	Netherlands	54.2	79.2	25.0	24
	Norway	80.0	90.0	10.0	10
	Portugal	0.0	50.0	50.0	6
	Spain	22.2	88.9	66.7	27
	Sweden	97.0	100.0	3.0	33
	Switzerland	39.5	65.8	26.3	38
	United Kingdom	62.3	84.9	22.6	106
EEMEA	Czech Republic	33.3	33.3	0.0	3
	Egypt	10.0	50.0	40.0	10
	Hungary	25.0	0.0	-25.0	4
	Israel	100.0	100.0	0.0	11
	Morocco	0.0	0.0	0.0	3
	Poland	25.0	60.0	35.0	20
	Russia	3.8	38.5	34.6	26
	South Africa	86.0	95.9	9.9	49
	Turkey	30.0	50.0	20.0	24
North America	Canada	56.4	75.5	19.1	102
	United States	73.0	85.7	12.7	587
Latin America	Brazil	29.7	42.3	12.6	78
	Chile	11.1	15.8	4.7	19
	Colombia	50.0	60.0	10.0	5
	Mexico	31.8	45.5	13.6	22
	Peru	0.0	0.0	0.0	1
Total		**41.1**	**58.8**	**17.8**	**2,359**

Women on the board and stock-market performance

Figure 7

Share price performance of all companies (with market cap > USD 10 bn)*

Source: Thomson Reuters, Credit Suisse
* Calculated on a sector-neutral basis

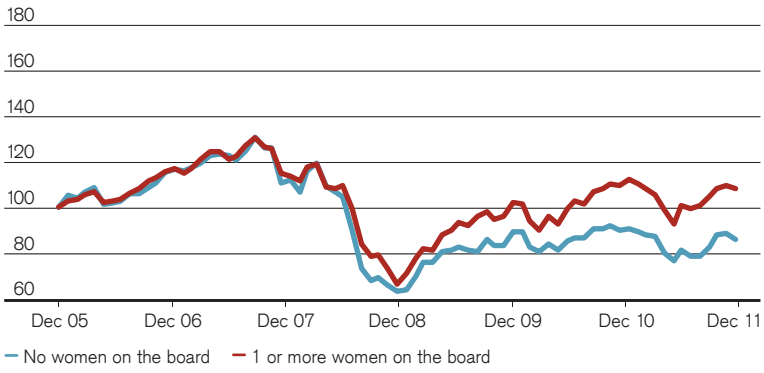


Figure 8

Share price performance of all companies (with market cap < USD 10 bn)*

Source: Thomson Reuters, Credit Suisse
* Calculated on a sector-neutral basis

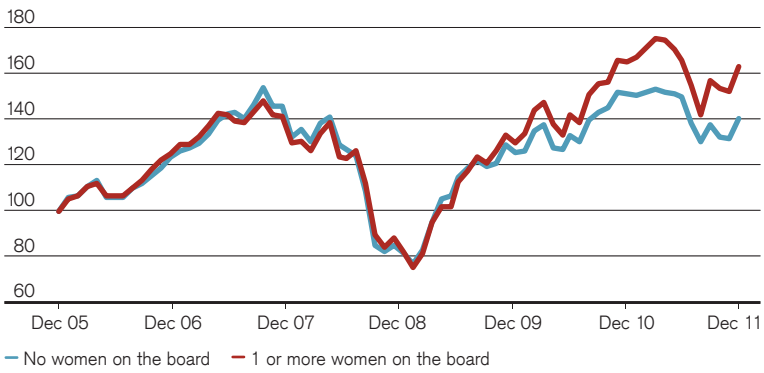
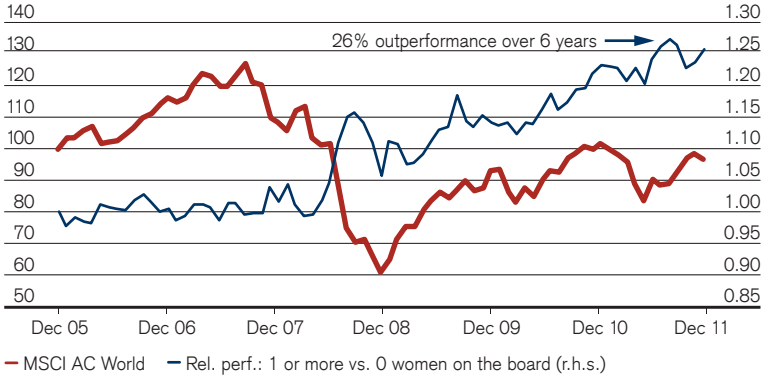


Figure 9

Relative share price performance of all companies (with market cap > USD 10 bn)*

Source: Thomson Reuters, Credit Suisse
* Performance of stocks with some female board representation divided by the performance of stocks with no women on the board, where all stocks have market capitalization greater than USD 10 bn



Our headline result is that, over the past six years, companies with at least some female board representation outperformed those with no women on the board in terms of share price performance.

Getting to this result was not straightforward. There is a bias from the skew in female representation towards certain sectors (consumer-related), certain markets (Europe) and towards large-cap stocks. Take the sector issue by way of example. The consumer staples sector ranks higher than average in terms of female board representation, but arguably the considerable share price outperformance the sector has delivered over the past few years has little to do with board composition and much more to do with the very stable and defensive nature of its earnings in a world of considerable earnings uncertainty.

Hence, in calculating the returns generated by companies with (a) one or more women on the board compared with those with (b) no women on the board, we have made three adjustments:

1. We look at performance from a sector-neutral stance. In other words, we have allocated the same sector weights in the calculations of both (a) and (b) in order to mitigate the impact of overall sector performance;
2. We split the sample universe into two baskets: one containing companies with market capitalization greater than USD 10 billion and one containing companies with market capitalization less than USD 10 billion. Hence, in broad terms, we are aiming to compare women versus no women on the board of large caps and separately, women versus no women on the board of mid-to-small caps. In this way, we can partially mitigate the survivor bias of small cap stocks in the construction of our sample universe; and
3. We look at the returns generated (on a sector-neutral basis) within each region as well as at the aggregate global level.

Figure 7 and Figure 8 illustrate the results for the large-cap (greater than USD 10 billion) stocks and for stocks of less than USD 10 billion in market capitalization, respectively, for the full global universe. **In both examples, the results demonstrate superior share price performance for the companies with one or more women on the board**.

Specifically, we find that for large-cap stocks (market cap greater than USD 10 billion), the companies with women board members outperformed those without women board members by 26% over the past six years. For small-to-mid cap stocks, the basket of stocks with women on the board outperformed those without by 17% over the same period. However, the performance pattern is far from con-

sistent over time. There was little differentiation in performance during the stronger growth environment that characterized the 2005–07 period. The share price performance of the universe of companies with women on the board really picked up with the onset of the bear market in the second half of 2008 and has been strong since then, as concerns over the global growth environment have continued to weigh on market sentiment.

The issue with our analysis is that while it is conducted on a sector-neutral basis and we have taken account of the size bias by splitting the universe into big and smaller caps, our global portfolio of companies with women on the board is still heavily skewed towards European names and away from Asian ones. Hence, market sell-offs precipitated by the macro crisis in Europe were another significant influence on relative performance in our backtest. To isolate this effect, we have conducted the same sector-neutral analysis but looked at the returns generated within each region, rather than just at a global level. Figure 11 and Figure 12 illustrate the pattern of returns generated within Europe and the USA along these lines.

From this analysis, we can now see a much clearer inverse correlation (–0.65 and –0.76 for Europe and the USA respectively) between the relative share price performance of companies with one or more women on the board compared with those with no women on the board and the overall market.

There are two conclusions to be drawn from this:
1. That stocks with a greater degree of gender diversification appear to be relatively defensive in nature; and
2. That the outperformance of stocks with women on the board may not continue if the world shifts back towards a more stable macro environment in which companies are rewarded for adopting more aggressive growth strategies.

Figure 10

Relative share price performance of all companies (with market cap < USD 10 bn) *

Source: Thomson Reuters, Credit Suisse
* Performance of stocks with some female board representation divided by the performance of stocks with no women on the board, where all stocks have market capitalization less than USD 10 bn

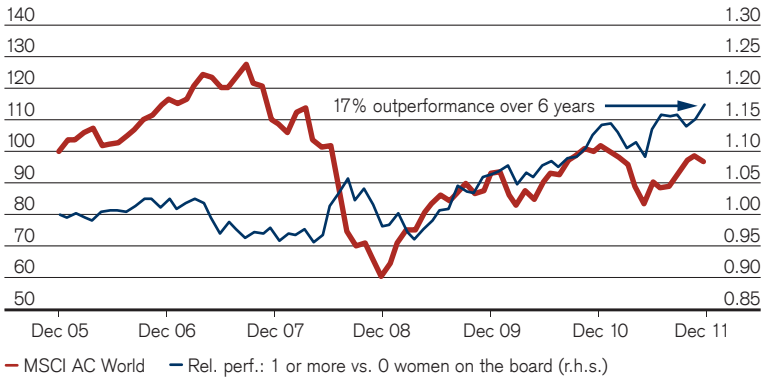


Figure 11

Share price relative performance of European stocks (with market cap > USD 10 bn) *

Source: Thomson Reuters, Credit Suisse
* Performance of European listed stocks with some female board representation divided by the performance of European listed stocks with no women on the board, where all stocks have market capitalization greater than USD 10 bn

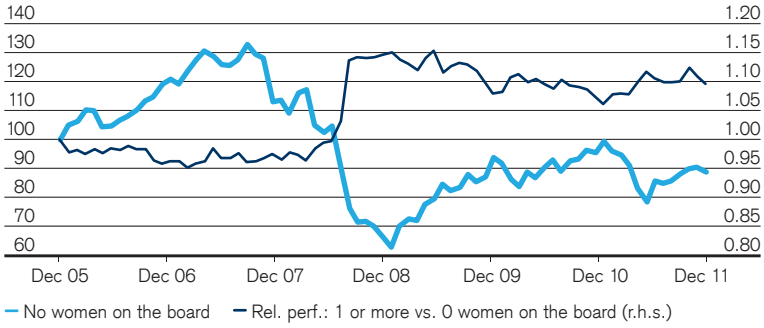
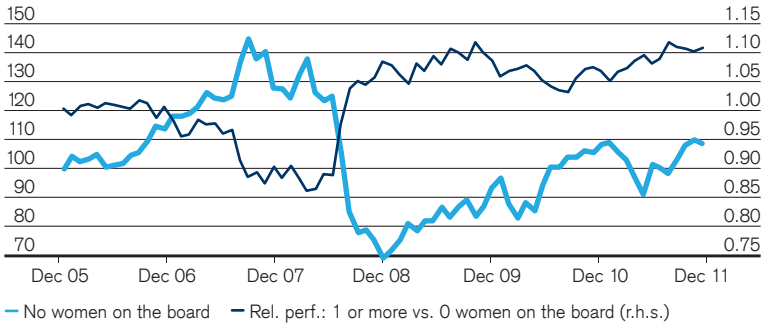


Figure 12

Share price relative performance of US stocks (with market cap > USD 10 bn) *

Source: Thomson Reuters, Credit Suisse
* Performance of US listed stocks with some female board representation divided by the performance of US listed stocks with no women on the board, where all stocks have market capitalization greater than USD 10 bn

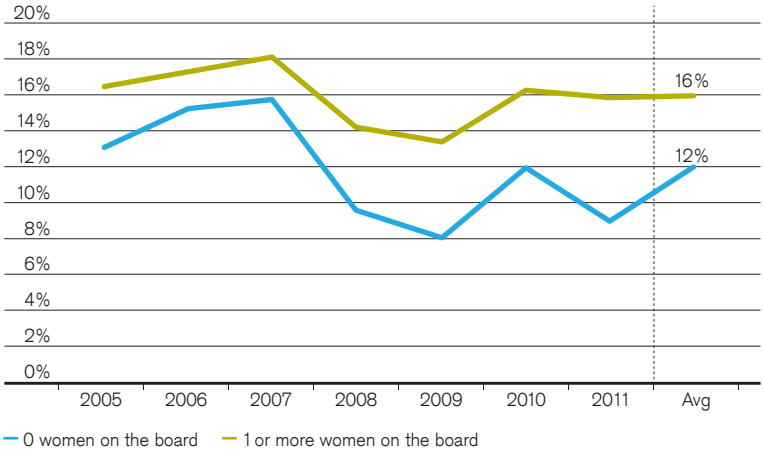


Women on the board and financial performance

Figure 13

ROE: 0 vs. 1 or more women on the board

Source: Credit Suisse



We have further used our dataset to consider the average financial metrics of companies with women on the board versus those without. In Figure 13 to Figure 16, we illustrate the four key findings:

1. Higher return on equity (ROE): The average ROE of companies with at least one woman on the board over the past six years is 16%; 4 percentage points higher than the average ROE of companies with no female board representation (12%).

2. Lower gearing: Net debt to equity of companies with no women on the board averaged 50% over the past six years; those with one or more have a marginally lower average, at 48%. However, we note the much faster reduction in gearing that took place at companies with women on the board as the financial crisis and global slowdown unfolded.

3. Higher price/book value (P/BV) multiples: In line with higher average ROEs, aggregate P/BV for companies with women on the board (2.4x) is on average a third higher than the ratio for those with no women on the board (1.8x).

4. Better average growth: Net income growth for companies with women on the board has averaged 14% over the past six years compared to 10% for those with no female board representation.

Further analysis shows that these results are also seen at a regional and sector level.

This financial performance is corroborated by other research. Catalyst Inc (2007) showed that Fortune 500 companies with more women on their boards were found to outperform their rivals with

return on sales 4 percentage points higher (13.7% versus 9.7% for the top and bottom quartiles ranked by the number of women on the board), and return on equity 4.8 percentage points higher (13.9% versus 9.1% for the top and bottom quartiles respectively). Similarly, using data on 1,500 US companies from 1992 to 2006, Deszõ and Ross demonstrated the "strong positive association between Tobin's Q, return on assets, and return on equity, on the one hand, and the participation rate (of female top management) on the other."

Ultimately, these results support the hypothesis that companies with a greater degree of gender diversification at board level are relatively defensive.

As the European debt crisis has unfolded, the best performers within the stock market have been those with stronger balance sheets (lower net debt to equity), higher average ROEs (often synonymous with higher cash-flow generation) and less volatility in the earnings cycle. In turn, our analysis shows that these characteristics are likely to be associated with some (rather than no) women on the board.

But, is it having a woman at board level that makes the difference to the structure of the business or would that business have delivered the same result regardless? None of our analysis proves causality; we are simply observing the facts. In the discussion below, we consider the links that may or may not be driving the two sides of the argument.

PHOTO: ISTOCKPHOTO.COM/KUPICOO

Figure 14

Net debt to equity: 0 vs. 1 or more women on the board

Source: Credit Suisse

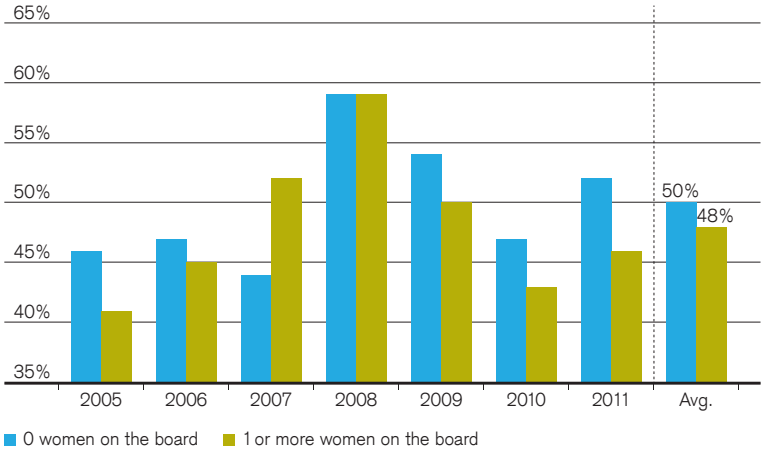


Figure 15

P/BV: 0 vs. 1 or more women on the board

Source: Credit Suisse

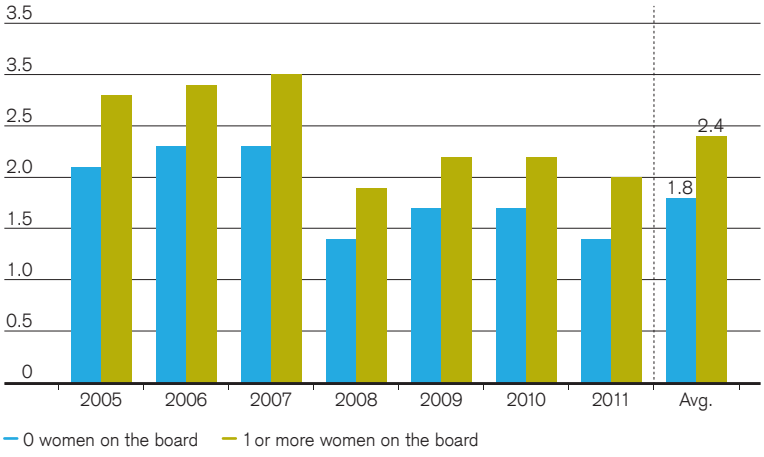


Figure 16

Net income growth: 0 vs. 1 or more women on the board

Source: Credit Suisse

Rationalizing the link between performance and gender diversity

We can identify seven key reasons why greater gender diversity could be correlated with stronger corporate performance:

1. A signal of a better company

There is a significant body of research that supports the idea that there is no causation between greater gender diversity and improved profitability and stock price performance. Instead the link may be the positive signal that is sent to the market by the appointment of more women: first because it may signal greater focus on corporate governance and second because it is a sign that the company is already doing well.

Adams and Ferreira (2009) looked at the impact of greater gender diversity on 1,939 US stocks between 1996 and 2003. On the face of it, their data showed positive gender diversity effects. However, using two different techniques to handle reverse causation, they found statistically significant negative effects on profits and stock value following the appointment of women to the board. Farrell and Hersch looked at 300 Fortune 500 companies between 1990 and 1999 and showed that firms with strong profits (ROA) are more likely to appoint female directors but that female directors do not affect subsequent performance.

The significant size bias that we found in our own analysis of the MSCI ACWI universe also supports the idea that it is mostly the larger companies that, to some extent by definition, have already performed well, that are more likely to appoint female board representatives. However, the strong outperformance of companies with women on the board, even in an exclusive comparison of the large caps, suggests there may be other facets to the relationship.

2. Greater effort across the board

Other evidence suggests that greater team diversity (including gender diversity) can lead to better average performance. Professor Katherine Phillips (Paul Calello Professor of Leadership and Ethics at Columbia University) and her colleagues have studied the impact of greater diversity in team exercises and found that (a) individuals are, on average, likely to do more preparation for any exercise that they know is going to involve working with a diverse rather than a homogenous group; (b) that a wider range of available data inputs are likely to be debated in a diverse rather than a homogenous setting; and (c) that the diverse group, in the end, is more likely to generate the correct answer to a particular problem than is the case for the homogenous group. In conclusion, it is not necessarily the performance of the minority individuals that have enhanced the result. Rather, it is the fact that the majority group improves its own performance in response to minority involvement. Simply put, nobody wants to look bad in front of a stranger. Hence, the greater the effort and attention to detail, the better average outcome in a more diverse environment. In the interview on page 20, we discuss these findings and other work in more detail with Professor Phillips.

In another fascinating study, Woolley et al (2010) provided evidence that the collective intelligence of a group was not mostly determined by the average or maximum intelligence of the individuals within the group but was better explained by the style and type of interaction between the group members. Specifically, the authors showed that the collective group intelligence was higher when (a) the social sensitivity of the individual group members was higher; (b) where there was a more even distribution in the conversation between individual group members (rather than having the conversation dominated by one or two people); and (c) when there were more women in the group. The three explanations aren't mutually exclusive: specifically, this test and other work has shown that women are typically more socially sensitive (identified as better at reading other people's thoughts) than men. Hence, by virtue of having a greater proportion of women in the mix, the social sensitivity of the group is naturally likely to be higher.

In other words the message is that, on average, most individuals in a working group will have something to offer (information, context, experience, processing powers) and provided each member of the group is given a chance to share their knowledge, the outcome for the team is likely to be greater than the sum of the parts. In practical terms, the key takeaways are (1) good management should allow group members a chance to voice their ideas to the rest of the team; and (2) gender diversity may be one way of skewing the sample in favor of this optimal outcome. From a corporate perspective, this also has to be the outcome that is most likely to be aligned with maximizing profit. By definition, profit is the economic value-added generated by combining various inputs

at cost. If the team result is better than the sum of the individual inputs, then it stands to reason that the team has added value.

The drawback in these examples (even in the simulated situations of the laboratory) is that diversity may bring greater tension and conflict to the decision-making process. Phillips et al showed that even though the diverse groups were more likely to produce a better result than the homogenous teams, their confidence in that result was lower and the working environment was perceived to be more difficult. Indeed, other studies (Jackson et al) have shown that the effects of conflict, poor communication and distrust can outweigh the potential positives brought on by different points of view. Ultimately, this is the challenge for management: to harness the positives of diversity while avoiding the pitfalls.

3. A better mix of leadership skills

McKinsey has looked at the impact of greater gender diversity in the workplace in a series of reports produced over the last five years. In "Women Matter 2" produced in 2008, they highlighted the differences in male and female leadership styles. The crux of the argument was that there are nine key criteria that, on average, define any good leader. Interestingly, women apply five of these nine leadership behaviors more frequently than men. For instance, women were found to be particularly good at defining responsibilities clearly as well as being strong on mentoring and coaching employees. Men were much better at taking individual decisions and then corrective action should things go awry. Hence, the idea that a degree of gender diversity at the board level would foster a better balance in leadership skills within the company may hold merit.

NASA has completed various studies on the impact of mixed gender crews. Similar to the McKinsey conclusions, women's leadership styles have been characterized by task orientation, mentoring others, and concern with the needs of others. All-male expeditions, on the other hand, have been characterized by competitiveness and little sharing of personal concerns. According to NASA, crew members have reported a general sense of "calmer missions" with women on board. Plus, 75% of male crew members also noted a reduction in rude behavior and improved cleanliness (no bad thing when packed into a confined space for a long period of time.)

4. Access to a wider pool of talent

Across the majority of markets, women now account for the greater proportion of graduates. As we illustrate in Figure 17, data from UNESCO show that by 2010, the proportion of female graduates across the world came to a median average of 54%. This compares with a median average of 51% female graduates in 2000. The trend towards an even greater proportion of female graduates looks set to continue if female success at primary and secondary school level is any guide. Data from the UK show that, in the national examinations (GSCEs) taken by the majority of 16-year-old students in 2011, 26.5% of girls achieved at least one of the top two grades whereas only 19.8% of boys achieved a top grade. Similar trends have been witnessed across much of the Western world, where school retention rates have moved higher for girls than boys over the course of the last ten years.

Hence, any company that achieves greater gender diversity is more likely to be able to tap into the widest possible pool of talent implicit in these graduation statistics. We note that the statistics haven't always been skewed towards higher female grades. If the average board member is 50 years old, it is arguably more relevant to consider the graduation rates of 25–30 years ago (i.e. 1982 to 1987). However, as an explanation for weak gender diversity in the boardroom now, it is far from conclusive. According to UNESCO, male and female tertiary graduation rates for North America and Western Europe hit parity in the early 1980s and have continued to move up in favor of higher female graduation rates since.

5. A better reflection of the consumer decision-maker

If we assume that women are, on average, likely to be more responsible for household spending decisions, it could follow that a corporate board with female representation may enhance the understanding of customer preferences. According to a book published by Boston Consulting Group in 2010, 73% of US household spending decisions are controlled by women.

Not surprisingly, consumer-facing industries already rank among those with the greater proportion of women on the board. Basic materials and industrial companies rank among the lowest in terms of female board representation.

6. Improved corporate governance

Following the scandals at several large corporates in the late 1990s, the Sarbanes-Oxley Act of 2002 in the USA and the Higgs Review of Corporate Governance in 2003 in the UK called for significant changes to the composition of corporate boards. Both called for greater balance on the board to offset the relative lack of independent advice and to reduce the homogeneity of the directors.

There is unusually strong consensus within academic research that a greater number of women on the board improves performance on corporate and social governance metrics. A study of Canadian companies (listed and unlisted) by Brown and Anastasopoulos in 2002 entitled Not Just the Right Thing, but the "Bright" Thing, showed that boards with three or more women performed much better in terms of governance than companies with all-

male boards. The study also found that the more gender-diverse boards were more likely to focus on clear communication to employees, to prioritize customer satisfaction, and to consider diversity and corporate social responsibility. More recent research (2010) conducted by Harvard Business School demonstrated similar results.

Adams and Ferreira also suggest that gender diversity improves the performance of firms with weak governance but, on the downside, they point out that for firms where governance is already strong, greater gender diversity leads to "over-monitoring" which interferes with efficient management and could lead to reduced profits and adverse stock price movements.

As with everything, it seems to be a question of achieving the right balance.

7. Risk aversion

In research published in 2001, Odean and Barber showed that women tended to be much more risk-averse investors than men. Felton et al (2003) demonstrated that particularly optimistic men added to investment volatility: their portfolio performance was more likely to be extreme, whether great or extremely poor. Meanwhile, the same result did not hold true for women: there was no difference in investment style between more or less optimistic women. Women just remained more risk averse regardless of their outlook.

Other research corroborates these conclusions. A report compiled by Professor Nick Wilson at Leeds University Business School showed that having at least one female director on the board appears to reduce a company's likelihood of becoming bankrupt by 20%, and that having two or three female directors lowered the likelihood of bankruptcy even further. Professor Wilson went on to state that "the negative correlation between female directors and insolvency risk appears to hold good, irrespective of size, sector and ownership, for established companies as well as for newly incorporated companies."

Our own analysis of the MSCI AC World constituents showed that companies with women at board level are more likely to have lower levels of gearing than their peer group where there are no women on the board. We note that lower relative debt levels have been a useful determinant of equity market outperformance over the last four years. As we illustrate in Figure 18, lower gearing has delivered average outperformance of 2.5% per annum over the last 20 years and 6.5% per annum over the last four years (within European listed equities). It is far from a consistent determinant of performance: in periods of rapid economic expansion and equity bull markets, low gearing is often an underperforming style. Nevertheless, on average, the style has worked well and the inverse correlation between female management and risk aversion (or debt) is notable.

Figure 17

% of female graduates vs. GDP per capita

Source: UNESCO, IMF, Credit Suisse

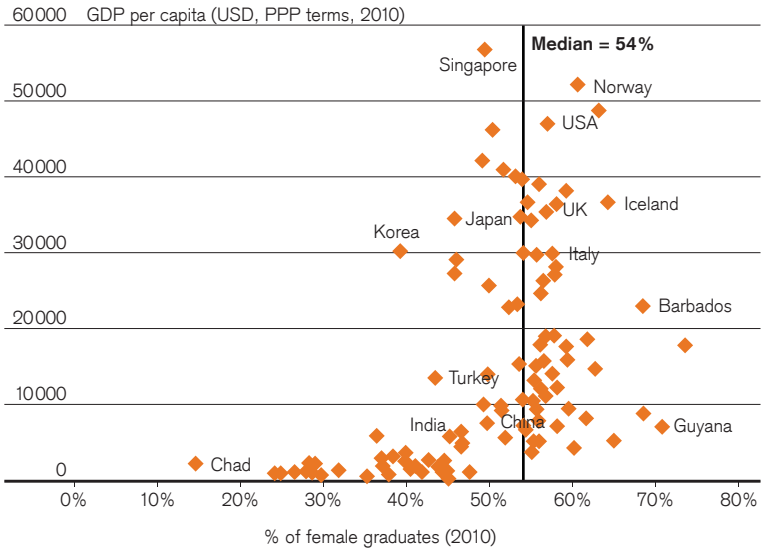
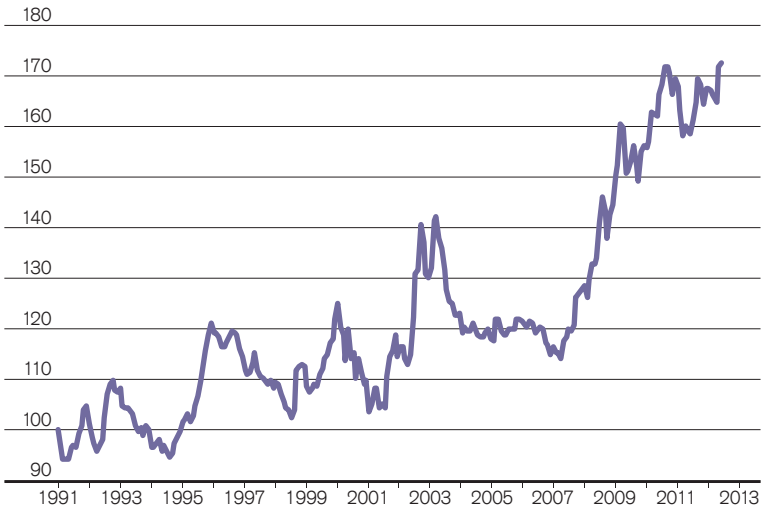


Figure 18

Performance of European stocks with low gearing relative to those with high gearing

Source: Credit Suisse



The value of diversity

Interview with Professor Katherine Phillips, Paul Calello Professor of Leadership and Ethics, Columbia Business School, New York

Research Institute: Could you start by summarizing your principle field of research?
Katherine Phillips: I am basically a social psychologist by training. My PhD was in Organizational Behavior and the work that I do focuses mainly on the issues of diversity in the workplace. Specifically, I look at how diversity influences team decision-making and organizational outcomes.

What kind of data do you look at and collect in order to study the impact of diversity?
Katherine Phillips: Data sources in this field have evolved over time. When I first started doing research on diversity, a lot of the work was based on surveys completed by employees within an organization. However, this has since transitioned into experimental methodologies in a controlled environment. For example, we may collect data from a series of experiments in a classroom where we control the flow of information to a group (or to individuals within that group). In a controlled environment such as this we can easily alter the degree of diversity or homogeneity and we can tailor the test so that there is a right answer, which gives us an opportunity to quantify the effectiveness of the team.

From a team perspective, what are the main positives and negatives of diversity?
Katherine Phillips: The main benefit of diversity is often assumed to be the impact of the different perspectives brought to the table by the minority group. The work that we have done suggests this is far from the only benefit. We find that diversity really changes the experience of all the people in the group. We find that people who are in the social majority will actually think much more critically about the problems that they're working on when they're in a diverse group. In a diverse environment, individuals expect there to be differences in perspectives, they recognize that those perspectives should exist, and they work harder to assimilate different ideas. On average, our studies show that the results generated by the diverse teams are better than they are for the homogenous groups.

The downside to diversity is the feeling of greater conflict and tension within the team. It's not obvious at all to the diverse team that they might come out with a better result but they do know that they are working hard and that assimilating conflicting viewpoints can be an uncomfortable experience. This typically undermines the confidence that diverse teams have in the quality of their results.

Will diverse groups that initially work badly (or think that they work badly) together improve with time?
Katherine Phillips: Yes, that is the case. Some interesting work done by Watson, Kumar, and Michaelson has shown that, although diverse groups might initially start off underperforming, over time their relative performance will probably exceed that of the homogenous groups. A key variable here is management feedback. If management supports these diverse groups and encourages them to stay together then there is a much higher probability of success. Given the sense of greater conflict and stress in the more diverse setting, the initial message from the team back to management is unlikely to be that positive. If leadership allows this feedback to dominate their judgment it is possible that diversity will be abandoned before any positives can be reaped. Hence, the importance for leaders to stay the course and recognize that diversity should pay off over time.

Does greater diversity always give positive results?
Katherine Phillips: My work is basically focused on situations where people have to learn from one another, where they will benefit from sharing information, where some creativity is required and where the problems that they're trying to solve are complex enough. In these cases diversity is typically beneficial. In situations where you have routine tasks and limited complexity, the benefits of diversity are likely to be more limited.

However, there is also the question of making sure that your company has access to the best possible talent. Given trends in globalization, immigration and demographics, the composition of the work force is likely to look very different in the long run. Greater diversity suggests a change in the working environment in order to adapt to the needs of different people. Companies that can do this better are more likely to attract the best talent, no matter who that talent is. And that should be a strategic advantage for that company.

Is gender diversity likely to be more or less successful than other sorts of diversity?
Katherine Phillips: Interestingly, the literature doesn't suggest that gender diversity is any more likely to be successful than any other type of diversity. The issues are two-fold: (1) a woman's status is often perceived as lower than that of a man and hence she isn't given the equal footing that we have found to be a key ingredient in achieving success through diversity; and (2) there is a significant body of evidence that shows that women don't speak

PHOTO: NATHAN MANDELL

Professor Katherine W. Phillips joined the faculty at Columbia Business School as the inaugural Paul Calello Professor of Leadership and Ethics in 2011. She has a PhD in Organizational Behavior from Stanford University's Graduate School of Business. She has published considerable research on issues of information sharing, diversity, status, minority influence, decision-making, and performance in work groups, and is the recipient of numerous professional awards, including recognition from the International Association of Conflict Management, and the Gender, Diversity and Organizations Division of the Academy of Management.

up as much as men do in discussions, which means they are less likely to cause conflict but also means the differences in perspectives aren't as readily available to the other members of the team either.

From our own tests, the results show that companies with greater gender diversity at the board level perform better during times of economic stress. Is risk aversion, driven by the female bias on the board, the driving factor here?
Katherine Phillips: Yes, recent research completed by Faccio, Marchica and Mura supports the results that you have collected. Their study shows that CEO gender helps explain corporate decision making; that firms run by female CEOs have lower leverage, less volatile earnings and a higher chance of survival than firms run by male CEOs. Other work conducted by John Coates at Cambridge University has shown that not only do testosterone levels increase with success but that higher testosterone increases the tolerance for risk. Arguably these traits have exacerbated the degree of boom and bust in the markets. Given that women and older men typically have much lower levels of testosterone, their influence is likely to lend more balance to the situation and reduce the degree of risk taking.

However, although some of the benefits of greater diversity in leadership may be more obvious now at a time of relative economic stress, we shouldn't conclude diversity is not necessary when the situation reverses. It's really about getting a balance in the room, to give the team the flexibility to respond appropriately depending upon the external environment.

Can the benefits of diversity be achieved through quotas?
Katherine Phillips: I actually believe that changing organizations and changing representation in organizations sometimes does require something like a quota. In the short term this may come with potentially negative side-effects and it may appear that diversity is detrimental to performance. However, the benefits to diversity are really delivered over the longer term and if setting quotas is the only way to deliver change then it may be a necessary and justifiable strategy.

The lessons from affirmative action are interesting in this respect. In hindsight, I think that affirmative action has served a very important role in opening a door to let people in but the responsibility for creating an equal playing field for all does not stop there. Let's take experience as an example; of course the person with 20 years of experience relative to the person with no experience is going to be better at a given job, but that's not to say that people with no experience (from the minority group) cannot be equally competent if given the same opportunities. And so I strongly believe that quotas do serve an important purpose, and that as the doors are opened and greater diversity is allowed into the room, some of the benefits will come through.

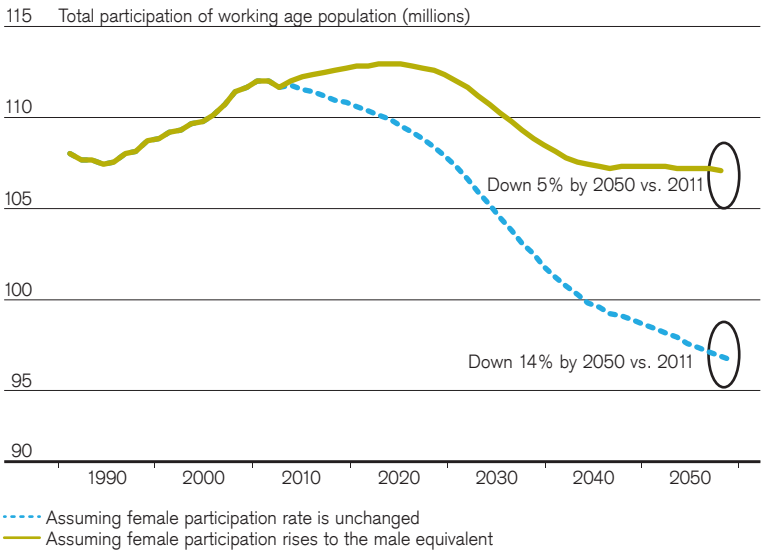
Do you get the sense that the rate of change in diversity is increasing?
Katherine Phillips: Many models of change show that there is a tipping point at which an idea, a trend or a fashion can become suddenly ubiquitous. I get the sense that we are getting close to a tipping point over the issue of diversity. For large US corporates, it is almost out of step if you aren't thinking about diversity issues. That's not to say that every company will join in the trend (some people never see that popular movie, right?) but on average momentum appears to be building in favor of greater diversity generally, including greater gender diversity.

Achieving the targets – easier said than done!

Figure 19

Two scenarios for the working age population in Europe

Source: World Bank, US Census Bureau, Credit Suisse



Beyond the potential positive implications of greater female representation at the micro level, there are also major macro implications of greater female participation. Greater female inclusion in the workplace is a potential solution to the growing skill shortages faced by much of the Western world as working age populations decline.

In Figure 19, we illustrate the problem for Europe. The working age population is forecast to decline by 2.2% over the next ten years and 14% by 2050 (based on forecasts from the US Census Bureau). However, if the female participation rate for Europe gradually rises from an average 51% (in 2010) to the male equivalent (65%) over the next 40 years, then the European working age population would increase by 0.6% over the next ten years and only decline by 4.7% by 2050.

In Figure 20, we look at the position for individual markets across the world. The greatest differentials in male and female participation rates are recorded in the North African and Middle Eastern markets.

The data for India also suggest a considerable gap between male (81%) and female (29%) participation rates. However, the incentive to raise female participation rates is arguably greatest in core Europe, Eastern Europe and Japan, where forecast growth rates in working age population are weakest.

It is perhaps not surprising that various European markets have taken relatively decisive action to raise the profile of women in business, including their representation at board level. The quota system set by Norway is probably one of the most extreme measures undertaken. However, despite the demographic pressures, Japan appears to have done relatively little to promote female representation at board level according to the data.

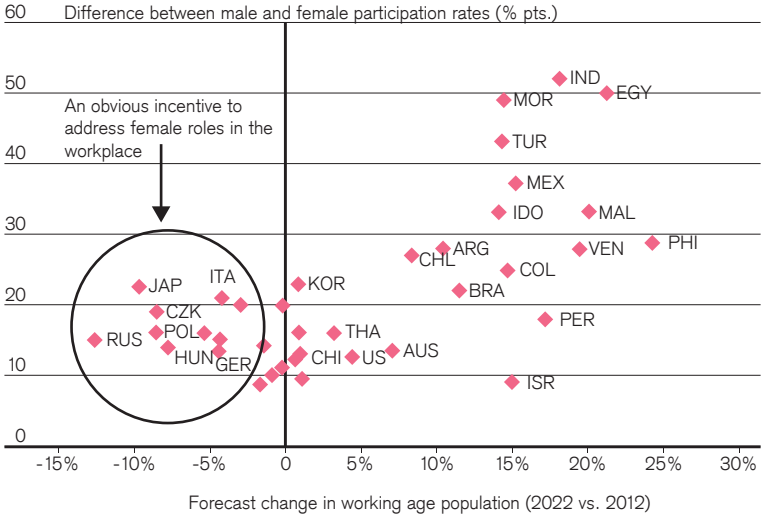
The targets

Public and private policies aimed at raising the profile of women in the workplace and on the board have become more wide-ranging over the last five

Figure 20

Growth in working age population vs. the difference in male and female participation rates

Source: World Bank, US Census Bureau, Credit Suisse



years. Demographic concerns, renewed focus on corporate governance issues in the wake of the financial crisis, as well as the debate over the potential positives brought about by greater diversification have increased the focus on female board representation.

A full range of solutions has been trialed across different markets. Norway has taken coercive action, the USA and Canada have encouraged voluntary commitments, the UK has adopted a collaborative approach. Progress has been similarly varied. The Scandinavian markets have delivered significantly higher female board representation but other research suggests that forcing the issue via quotas has been to the detriment of morale, the working environment and potentially profitability. Meanwhile, progress in the southern European markets has been limited.

In the table on the following page, we summarize the various measures that have been adopted across different markets and the latest available numbers on progress. It is striking that so many countries are taking some kind of a stance on female board representation. By our calculations, seven countries have already passed legislation incorporating mandatory targets and a further eight countries have non-mandatory targets. Of the major world economies, there are still some notable exceptions to this trend (such as Switzerland and some of the larger Asian markets). However, even in China the profile of women in leadership roles is probably on the ascendancy: Credit Suisse expects a woman to be elected to the powerful nine-man Standing Committee of the Politburo towards the end of 2012. This would be the first time in its history that a woman has been appointed to the Standing Committee.

PHOTO: KEYSTONE/PICTURE ALLIANCE/CULTURA RM ADRIAN WEINBRECHT

Figure 21

Policies and progress in female board representation

Source: Credit Suisse

Market	Policy	Progress
Australia	Australian Securities Exchange diversity guidelines require companies to disclose the number of women on staff, in senior management and on the board.	Women now account for 13.5% of ASX200 directorships up from 8.4% at the end of 2010.
Austria	In mid March 2011, the Austrian government agreed to the implementation of female quotas for supervisory boards of state-owned companies. A quota of 25% is to be brought in by 2013 with an increase to 35% by 2018. No sanctions for non-compliance have been set. The hope is that private companies will follow the example set by the state-owned enterprises.	7.5% of board members are women, according to the latest data from Catalyst.
Belgium	Belgium's parliament adopted a plan in June 2011 to force public enterprises, and companies that are listed on the stock exchange, to give women 30% of the seats on management boards. Under the new rules, each time a board member leaves he or she is to be replaced by a woman until the quota is fulfilled. Companies will have six years to reach the target, with small and medium-sized enterprises (SMEs) given eight years. Members of boards that do not reach the quota will lose the benefits that come with their jobs.	7.7% according to the latest Catalyst survey.
Canada	In the 2012 budget, the government proposed the creation of an advisory council of leaders from the private and public sectors to promote the participation of women on corporate boards.	Women make up just 14.5% of directors on Canada's 500 largest company boards, according to a recent census by Catalyst.
Denmark	From 2008 the "comply or explain" code has required that diversity must be taken into account in all appointments.	13.9% of board members are women, according to the latest data from Catalyst.
EU	The European Commission is monitoring the progress of female board representation and has set a target of 40% by 2020. No formal mandates have been set.	14% of women across European boards of listed companies are now women, up from 12% in 2010.
Finland	As of 1 January 2010, all listed companies have been required to have at least one man and one woman on the board. There are no penalties for non-compliance beyond the need to explain why the target has not been met.	By April 2012, women accounted for 22% of listed company board members, up from 12% in 2008.
France	Parliament passed a bill in mid January 2011 applying a 40% quota for female directors of listed companies by 2017. The quota also includes a target of 20% by 2014. The sanctions for non-compliance are that nominations would be void and fees suspended for all board members.	The rate of women on governing boards has increased from 8% in 2008 to 12% in 2010 to c. 14% now.
Germany	The German Corporate Governance Code was amended in May 2010 to include a statement recommending boards of directors consider diversity when recruiting to fill board positions. The government has discussed setting an aim of 30% representation by 2018.	Women make up 15.6% of the boards of large listed companies.
Iceland	Passed a quota law in 2010 (40% from each sex by September 2013) applicable to publicly owned and publicly limited companies with more than 50 employees.	-
India	The Ministry of Corporate Affairs has proposed making at least one woman director mandatory in (as yet to be) prescribed types of companies. However, Parliament is yet to rule on any such legislation.	5.3% according to 2011 data from Catalyst.
Italy	A third of a company's board must be women by 2015 or the business will face fines of up to EUR 1 m, or USD 1.3 m, and the nullification of board election.	Only 4.5% of Italy's directors are women, according to GMI.
Malaysia	All public and limited liability companies with over 250 employees are required to have at least 30% women on their boards or in senior management positions by 2016.	As at November 2011, the percentage of women in senior positions in 200 companies listed on the Bursa Malaysia was 7.6%.
Netherlands	Government guidelines suggest that a minimum 30% of the board members of all companies with more than 250 employees should be women. If this goal is not reached by January 2016, companies must prepare a plan on how they intend to achieve it.	18.5% of board members are women, according to Catalyst.
Norway	In February 2002, the government gave a deadline of July 2005 for private listed companies to raise the proportion of women on their boards to 40%. By July 2005, the proportion was only at 24%, and so in January 2006 legislation was introduced giving companies a final deadline of January 2008, after which they would face fines or even closure. Full compliance was achieved by 2009.	Achieved the 40% target of women on the board by 2009.
Poland	The corporate governance code recommends balanced gender representation on boards.	Just short of 11% of board seats are held by women.
South Africa	Policies relating to Black Economic Empowerment (BEE) specifically targeted greater levels of racial diversity at board level and have indirectly raised the profile of women on the board. A Gender Equality Bill is being finalized. This may propose giving government the power to force companies to appoint women to half of all top positions.	15.8% of board members are women, according to the latest data from Catalyst.
Spain	Passed a gender equality law in 2007 obliging public companies and IBEX 35-quoted firms with more than 250 employees to attain a minimum 40% share of each sex on their boards by 2015. Companies reaching this quota will be given priority status in the allocation of government contracts but there are no formal sanctions.	Women made up 6.2% of boards in 2006 and 11.2% by early 2011.
Sweden	The "comply or explain" code requires companies to strive for gender parity on boards. Quotas have been discussed but not set.	Latest data suggest 27% of board seats are occupied by women, up from 22% in 2010 and 6% in 2002.
UK	The government has asked FTSE 100 companies to aim for a minimum 25% female board representation by 2015 and further recommended that all FTSE 350 companies should explicitly set out their percentage targets for 2013 and 2015. The targets are not mandatory but are designed to encourage rather than coerce progress in female representation in top management.	By the end of 2011, women accounted for 16% of FTSE 100 positions, up from 12.2% in 2009 and 7.2% in 2001.
US	Under the Dodd-Frank Act, Diversity Offices will implement rules to ensure the fair inclusion and utilization of minorities and women in all firms that do business with government agencies. The US SEC introduced a new code in December 2009, requiring the disclosure of how board nomination committees consider diversity in selecting candidates for board positions.	16.1% of board members are women, according to the latest data from Catalyst.

No policies or proposals: Switzerland, Japan, Korea, Singapore, Hong Kong, China, Brazil, Russia.

Barriers to change

As Norway may have proved, forcing the pace through a quota system may yield the targeted result. However, it is clear that there are plenty of hurdles (some, but not all, of which are fairly structural) that are always likely to limit female representation on the board or indeed in other senior management positions.

The double burden

The so-called "double burden" refers to the dual role undertaken by working women: one job in the formal workplace and the other managing the household and family. Statistics calculated by Eurostat suggest that, on average, European women spend twice as much time doing domestic chores as men: four hours and 29 minutes a day compared with two hours and 18 minutes for men. Over and above this preponderance to perform household tasks, the other issue is children. Starting a family, on average, involves some kind of a break from the workplace and this is often not compatible with the demands of a high profile leadership position. Maternity leave and reduced mobility are seen as impediments to promotion and fulfilling a management role: in the USA, according to a Catalyst study, 62% of women surveyed reported that family obligations were an obstacle to promotion. In France, 96% of female graduates from the "Grandes Ecoles" believed that having children, or being of child-bearing age, hindered promotion prospects.

But it is not just the perception of female employees that is the potential barrier to promotion; more women than men choose to opt out of a professional career to have, or look after, a family. This automatically reduces the talent pool that managers can choose from and limits the number of women available for board positions.

The potential solution is to engineer a working environment that is compatible with family life, which should be to the benefit of all employees, men and women. This is likely to require buy-in from both the public and private sector. Public sector remedies include tax breaks or credits to help with the cost of nursery fees and legislation on maternity and paternity rights. Private sector remedies can come in many different forms: for example, flexible working hours, flexible working locations, provision of childcare services (e.g. an onsite crèche) or job-sharing opportunities. From a management perspective, the emphasis on career advancement should be focused on skills, capabilities and results, with less emphasis on time served.

Social typecasting

Stereotyping is evident in all walks of life. It's a useful shortcut to lend context to any situation but comes with a risk of perpetuating mistakes. An interesting example is highlighted by Malcolm Gladwell in his 2005 book entitled "Blink: Power of Thinking Without Thinking". In the book, Gladwell focused on the predicament of Abbie Conant, who auditioned for lead trombone with the Munich Philharmonic orchestra in 1980. Since another prospective candidate on the day was affiliated to the selection committee, the auditions were (unusually for the time) conducted from behind a screen. All reports suggest Ms. Conant delivered an exceptional performance but the selection committee were shocked (even horrified) to discover that she was a woman. The committee overcame their bias long enough to hire her but, sadly, not long enough to afford her equal pay and equal rights (for the next 13 years).

The impact of blind auditions on diversity within orchestras has been radical. A 1997 study conducted by Goldin and Rouse showed that prior to the introduction of blind auditions less than 5% of musicians in the top five orchestras in the USA were women. Once blind auditions became standard practice in the USA (over the 1970s and 1980s), this number rose sharply to 25% and now stands at close to 50%.

The problem with stereotyping is that it is not always a conscious reaction. In 1980, the Munich Philharmonic selection committee were shocked to discover the gender of their brilliant new trombonist because they were convinced that women just couldn't play that well. Only by forcing an objective decision did the consensus realize their long-term mistake. So, the lesson has to be that while there is a risk that stereotyping influences selection processes, it would be prudent to install, where possible, any measures to maximize objectivity. Psychometric tests are one such example, but another possibility would be screening CVs with names and personal details redacted.

Another study by Harvard Kennedy School revealed the specific impact of stereotyping in the boardroom. In the study, two groups of MBA students were each given separate case descriptions identical in all but one detail: the chief executive in one was named John and, in the other, was named Jane. On average, the students evaluated the performance of Jane more severely than John regardless of the fact that the two had delivered exactly the same performance. The perception embodied in the stereotype is that men are better leaders than women.

A study by Bohnet, van Geen and Bazerman (2012) showed that different outcomes were generated simply by the timing of when candidates were assessed for a particular post or promotion. If candidates were evaluated at the same time, the interviewer tended to rely less on stereotypes to make the decision and more on the evidence presented before them. However, if candidates were assessed one at a time, the interviewers were more likely to revert to stereotypes and, for example, assign male candidates to mathematical roles and female candidates to communication roles. Back to the boardroom case and we can understand that part of the reason Jane fared worse than John is because the students were asked to make a separate rather than a comparative assessment.

Hence, to the extent that promotion focuses on individual case assessments (making partner at a law firm, promotion to senior research fellow at a university, a higher grade within an investment bank), we can expect to see a degree of stereotyping and gender gaps develop.

Extensive academic literature on stereotypes suggests they are generally very slow and fairly difficult to change. However, Beaman et al noted that female leaders were more likely to be accepted within the community if their appointment came after a period of tenure of other female leaders. Ultimately, this highlights the positive impact that establishing role models can have with respect to changing the perception of stereotypes.

Appointment processes

Other literature highlights that idiosyncratic processes in board appointments are also partially responsible for lower overall levels of female board representation. Many board positions are not meaningfully advertised and are filled instead through informal networking systems. To the extent that these networks are dominated by men, it becomes a self-perpetuating cycle.

On that point, LinkedIn has shown that women tend to have fewer connections on professional online networking platforms. Torres and Huffman showed that men tended to have a social network biased towards men, while women generally had much smaller but more balanced networks, with approximately equal amounts of men and women.

Breaking the cycle basically means changing recruitment processes: widening the net and identifying a balance of candidates from each gender for board level and top management vacancies. The statistics on networking also suggest that organizing events or systems to improve networking opportunities, especially for women, may also help promote greater gender diversity in the workplace in the long run.

Character traits

Survey data show two particular character traits that are likely to impede professional progress for women. First, there is confidence in ability. Eagly's survey of MBA students showed that 70% of female respondents rated their own performance as equivalent to that of their co-workers, while 70% of men rated themselves higher than their co-workers. Similarly, an internal study at Hewlett Packard showed that women were only likely to apply for a particular position if they had already attained 100% of the selection criteria (such as required experience and qualifications), whereas most men were willing to risk an application providing they had achieved 60% of the advertised job requirements.

Second, women appear to have lower professional ambitions than men. According to a Harvard Business Review Survey, only 15% of highly qualified women aspire to positions of power, against an average 27% of men. A 2011 survey of 3,000 members of the Institute of Leadership and Management (ILM) suggested that women's aspirations to lead and manage were well below that of their male colleagues for all working ages: in the survey, only half of women said they expected to become managers, versus nearly two-thirds of men. Even in the younger age groups, where issues of equality have been instilled for a greater proportion of their lives, gender aspirations remained entrenched: of the under-30s, 45% of men compared with only 30% of women expected to become managers or leaders.

The lesson for employers is to tailor training and development to the different traits of male and female managers. Coaching and mentoring have proved to be the most effective ways of addressing women's lower confidence and lesser ambition.

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