

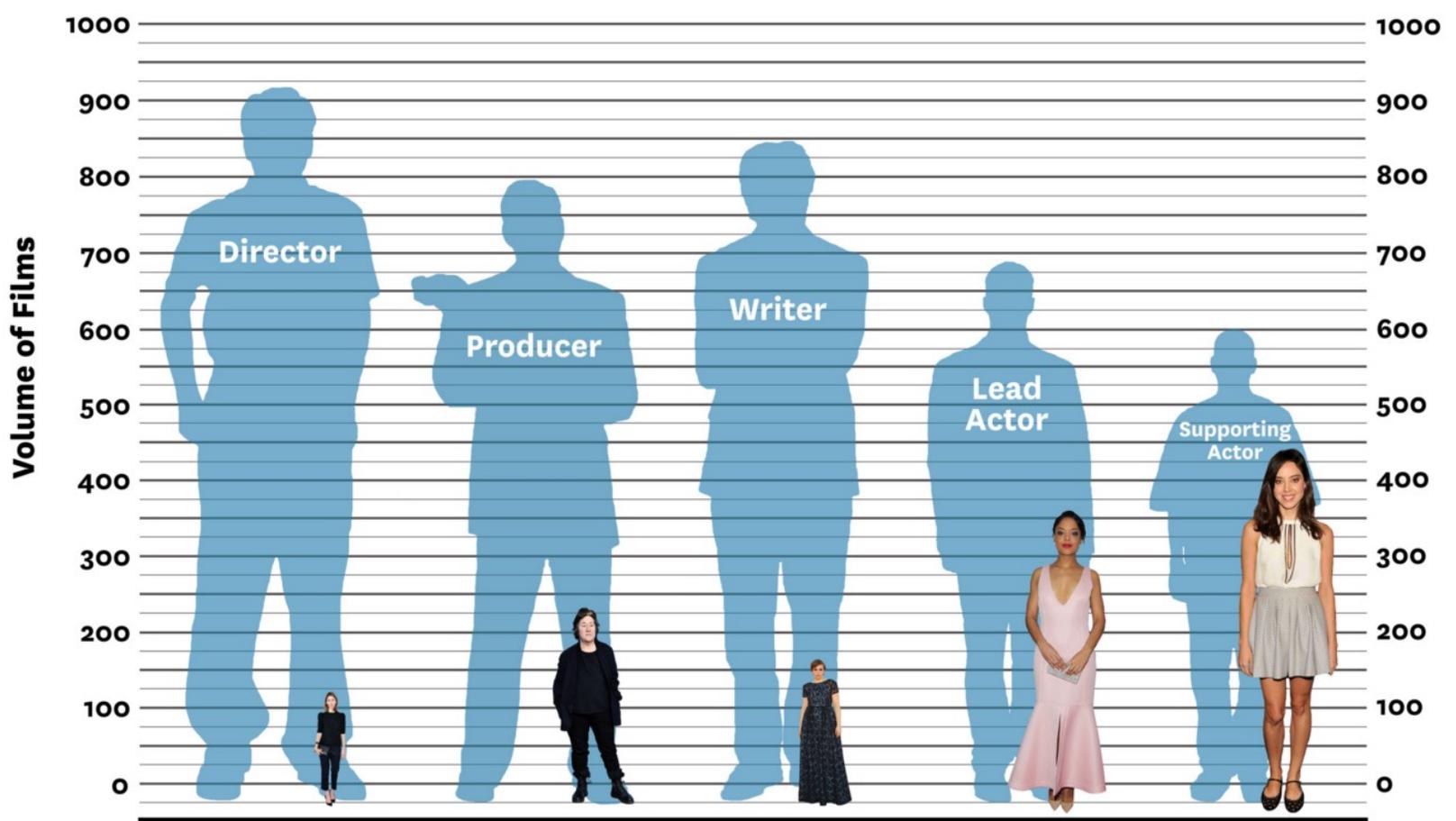
Data Exposes Gender Fault Lines

[INFOGRAPHIC]



Team Slated

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(see end of article for full infographic)

An eye-opening new infographic released today by **SLATED** illuminates cinema's gender disparities in an unprecedented, data-driven light. The company's analysis of 1,591 feature films released theatrically on at least one screen in the U.S. between 2010–2015 exposes a **systemic lack of trust** on the part of the film industry when it comes to collaborating with women in the workplace. This bias is expressed not just in the lower production budgets that women routinely operate from but, even more crucially, in the number of movie screens on which films by women directors are shown. This lack of theatrical exposure is most startling with films budgeted at

under \$25 million: Male-directed films in that budget range are shown on three times as many screens on average as those directed by women (646 screens for men vs 242 for women). This imbalance has a direct, adverse effect on those films' performance — as well as industry perception of female above-the-line talent.

Moreover, after scrutinizing box office performance, Slated's data analysis quantifies in glaring numbers the extent to which women in all key filmmaking roles are both underutilized and undervalued by the film industry. The often superior investment returns that women professionals on both sides of the camera generate in the marketplace, as compared with their male counterparts, is simply not matched by the opportunities and resources that they are able to command.

Using data analysis and its own algorithmic scoring systems Slated examined everything from genre choices to script quality in trying to establish where the gender fault-lines might be. Neither of those showed any material difference between men and women. But where there is an alarming schism is in the number of movie screens that showcase films made by women, particularly for lower budget movies. That data point jumped out and prompted internal discussions at Slated as to how data science can best be harnessed to offset what is evidently a pattern of institutionalized bias at play in the marketplace. When one looks at the ROIs, it's clear that women are outperforming men all over the place — so what can we do as an industry to make sure that the production volumes are more comparable?"

Among other findings that Slated's new infographic has identified and visualized are:

- **Women Directors** are the most under-represented major category in cinema, accounting for 8.8% of films made in this survey period. They are followed by **Women Writers** (13.2%), **Women Producers** (19.8%) and **Women Acting Leads** (29.4%) Even roles for **Supporting Actors**, which one might think would be close to fifty-fifty, are tilted towards men.
- Regardless of role, women are afforded smaller budgets than their male counterparts. And yet, with the exception of **Women Directors**, those same women generate higher returns despite deploying those smaller production resources.

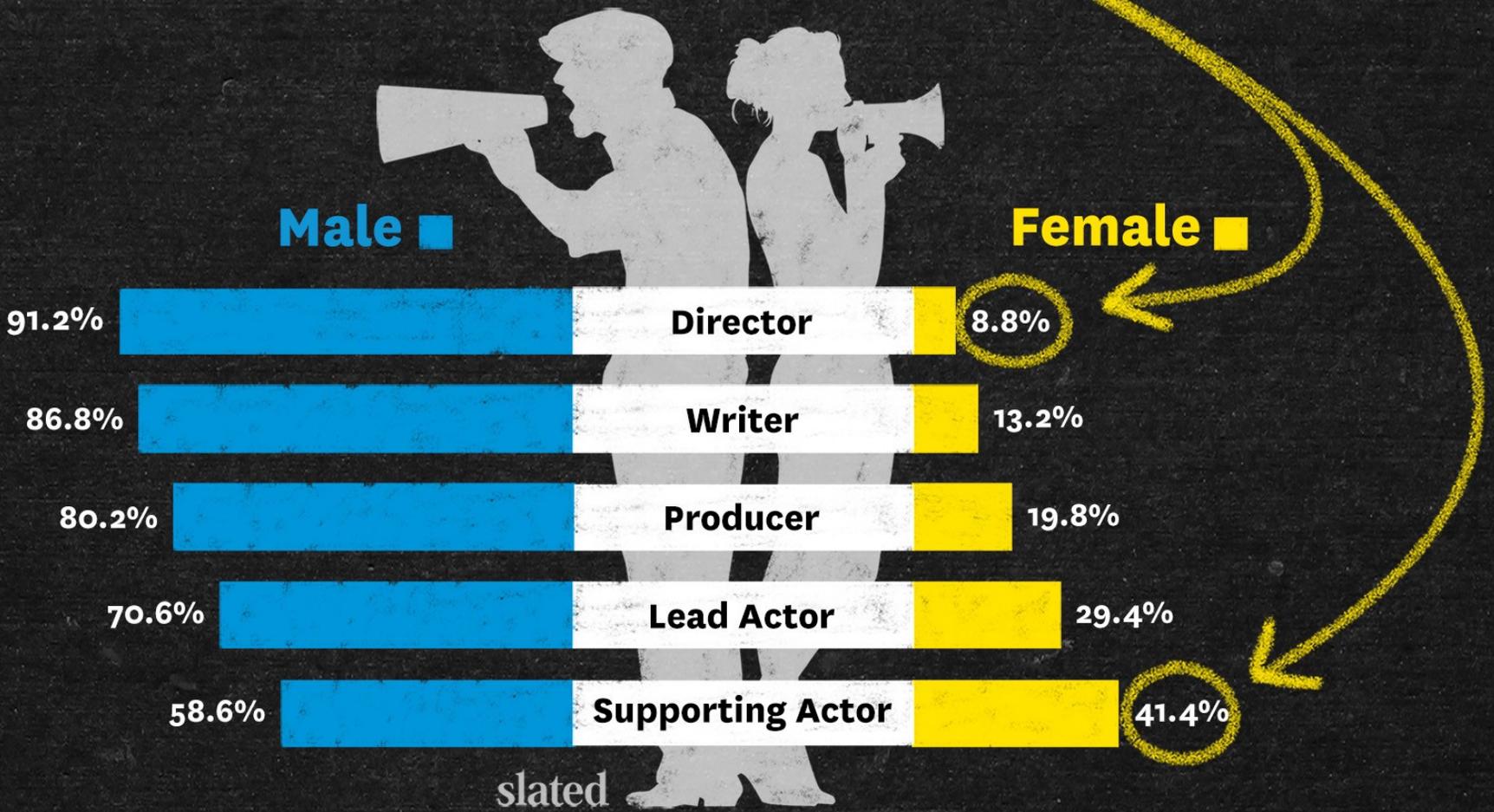
- **Women Writers** seem particularly shortchanged: Their scripts achieve the highest ROI of any category and yet their work commands two-thirds of the average budgets given to **Male Writers**. This imbalance becomes particularly egregious for films budgeted at more than \$25 million, a category in which **Women Writers** achieve an industry-high ROI of 3.72 and yet account for just 8.7% of theatrically released screenplays.
- Even though male writers generate considerably more theatrical material than women writers, the market potential for their screenplays is essentially the same. The tiny difference in their Slated SCRIPT SCORES, an industry-weighted measure of a script's quality that is derived from the year-adjusted performance analysis of 191 screenplays, does not come close to the imbalance in their script production volumes. For **Male Writers** that score is 78.0; for **Female Writers** it is 76.6.
- In every cinematic genre, far fewer films are directed by women than by men. But if you adjust for that discrepancy, you will see that the volume of films made in each genre by men and women flexes up and down in surprising synchrony. So, too, does the ROI on those genres for both sexes.

Here's the infographic in full:



SLATED's data team scrutinized the performance of 1,591 feature films that were theatrically released in the U.S. between 2010-15. That data analysis confirms in glaring numbers the disparity between men and women in filmmaking roles. (To learn more go to filmonomics.slated.com)

As you can see from the graphic below, **FEMALE DIRECTORS** are the most under-represented major category in cinema. But even **SUPPORTING ACTORS**, which one might think is close to fifty-fifty, is tilted towards men.

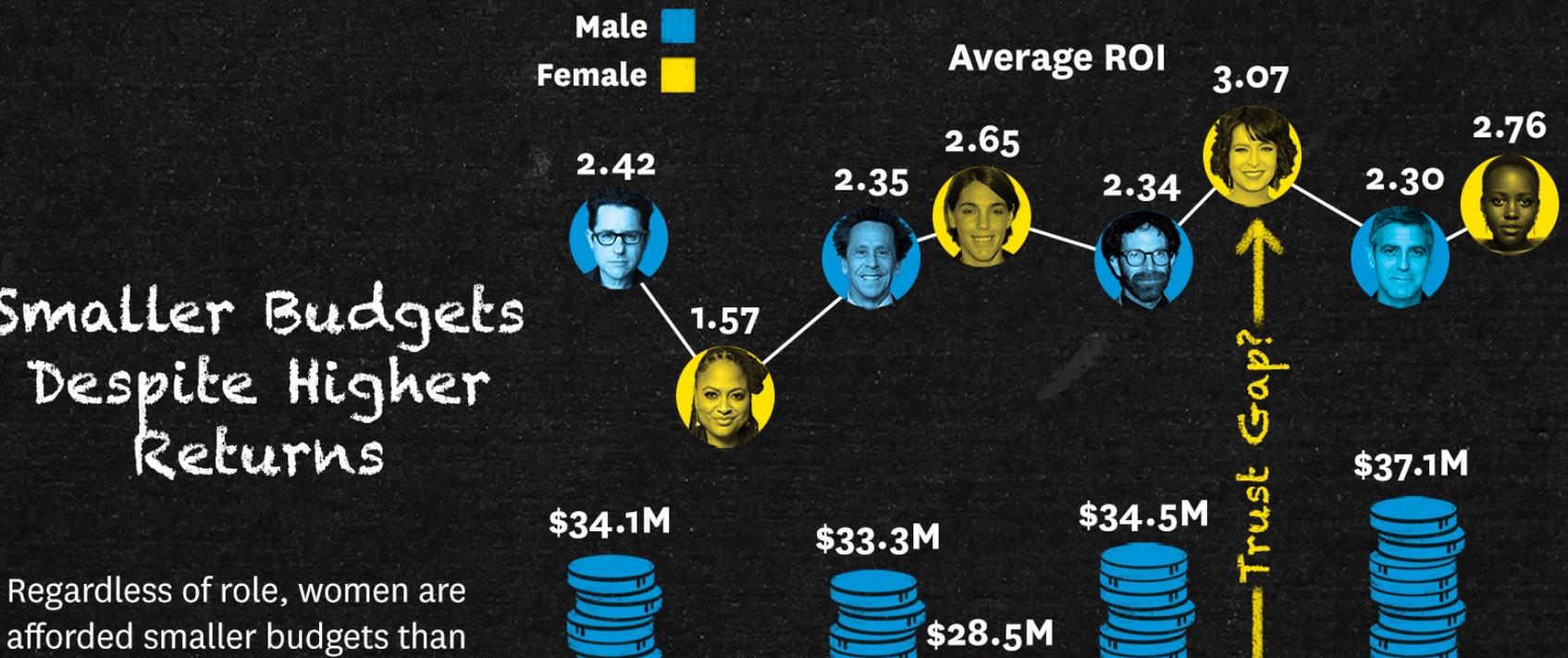


Return on Investment Formula

$$ROI = (\text{worldwide gross box office revenue}^*) - (\text{estimated marketing costs as \% of production budget}) + (\text{estimated tax credits/soft money}) \div (\text{production budget})$$

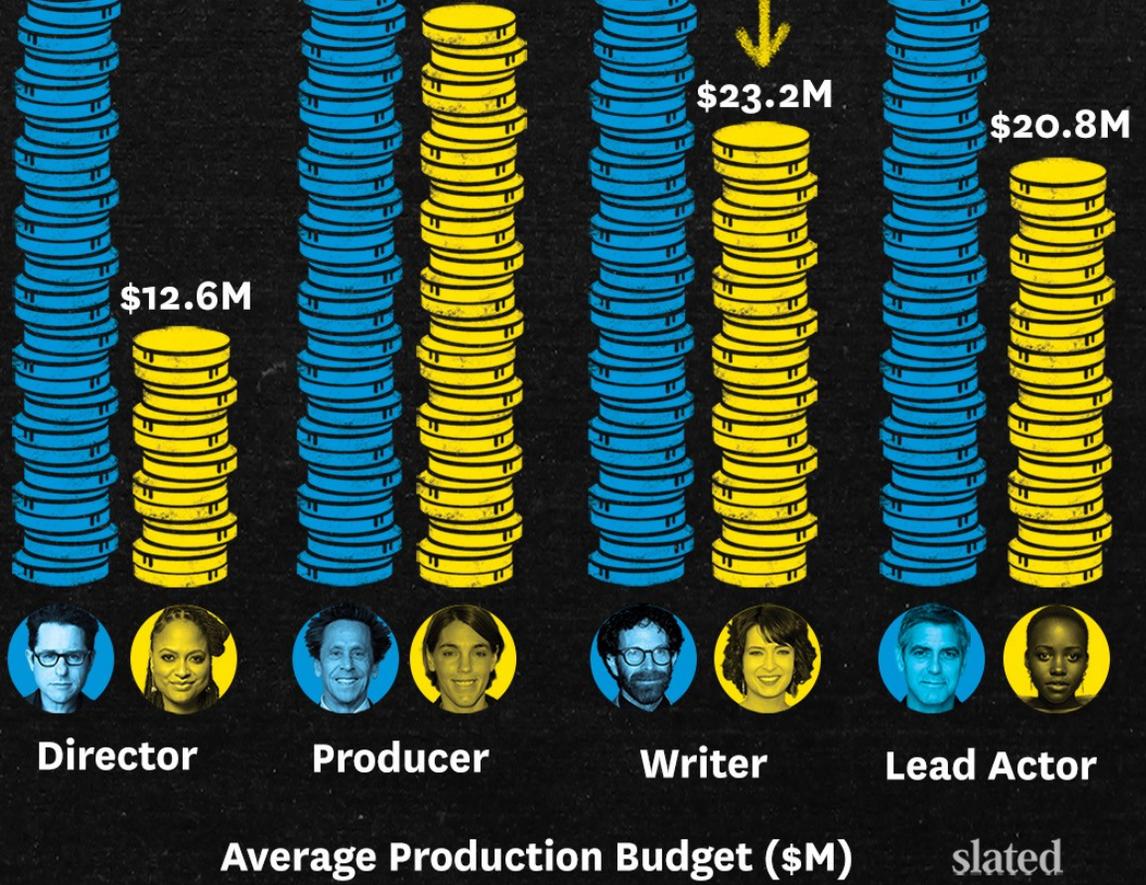
* Gross theatrical revenue is used rather than theatrical rentals primarily because reliable numbers for worldwide TV & video revenue are not publicly available for this dataset. Also, worldwide gross box office numbers have historically been a decent proxy for adjusted gross revenue from all sources.

Smaller Budgets
Despite Higher
Returns

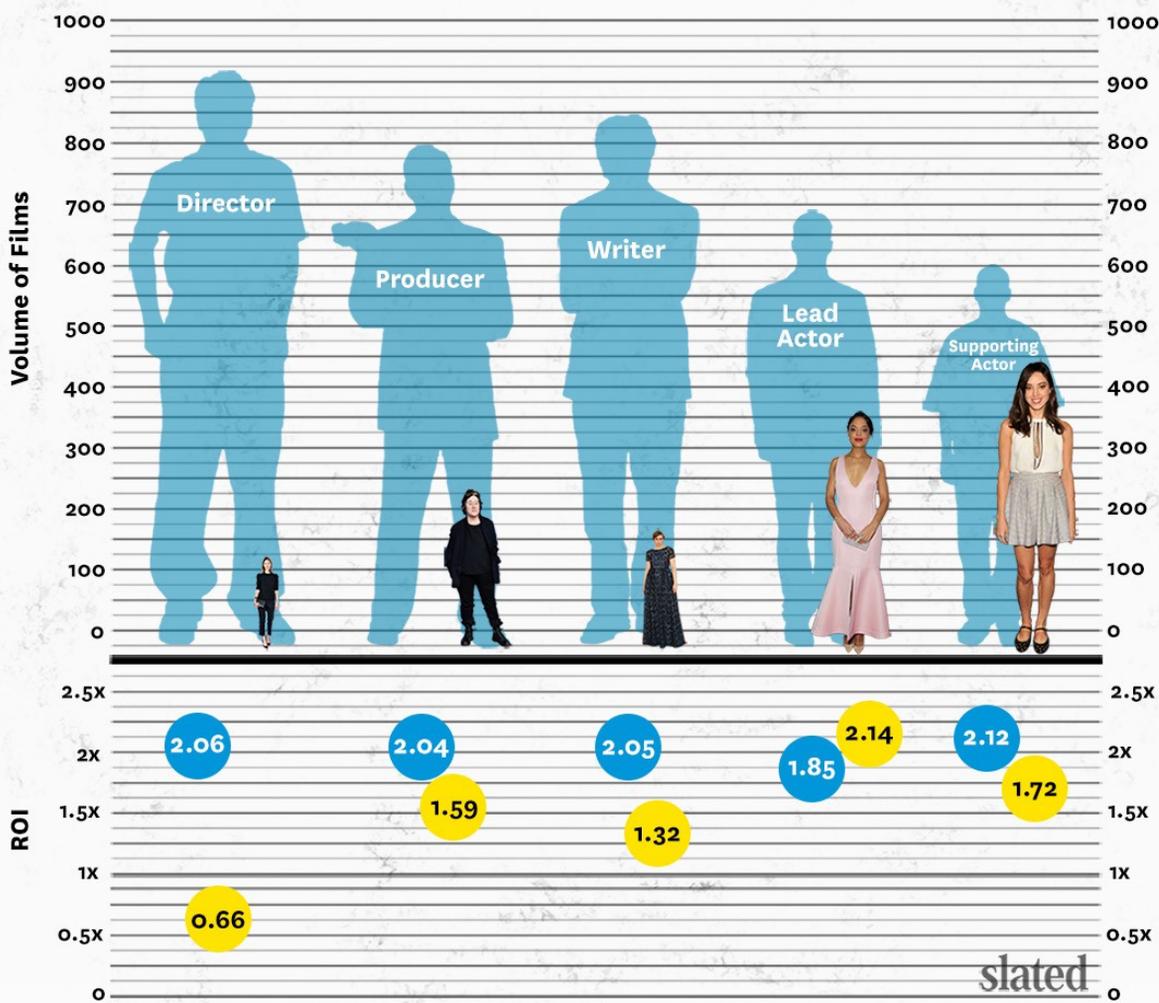


Regardless of role, women are afforded smaller budgets than

their male counterparts. And yet, with the exception of women directors, those same women generate higher returns despite deploying those smaller production resources. The gap between budgets and ROI suggests an industry-wide lack of trust. We can see another example of this same trust deficiency when the **number** of films involving women in key roles is also compared to the market **returns** from those films.



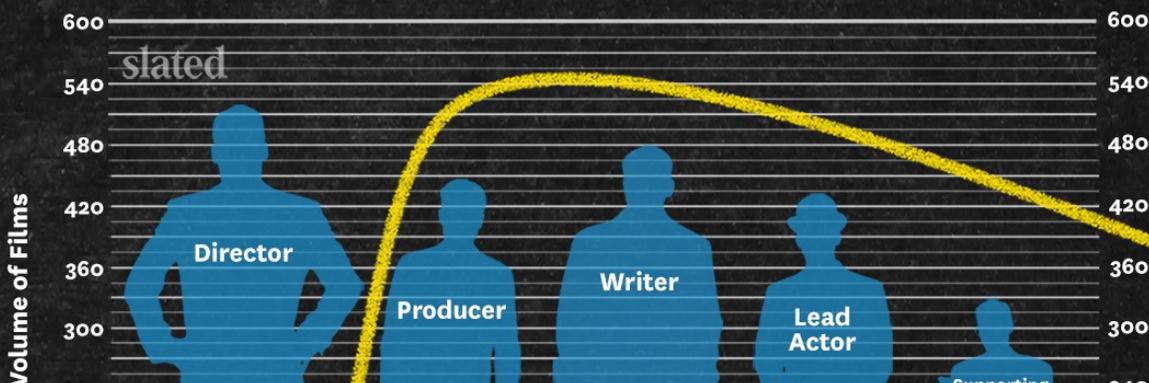
Budgets less than \$25M



Female Film Talent is OVERSHADOWED by Men

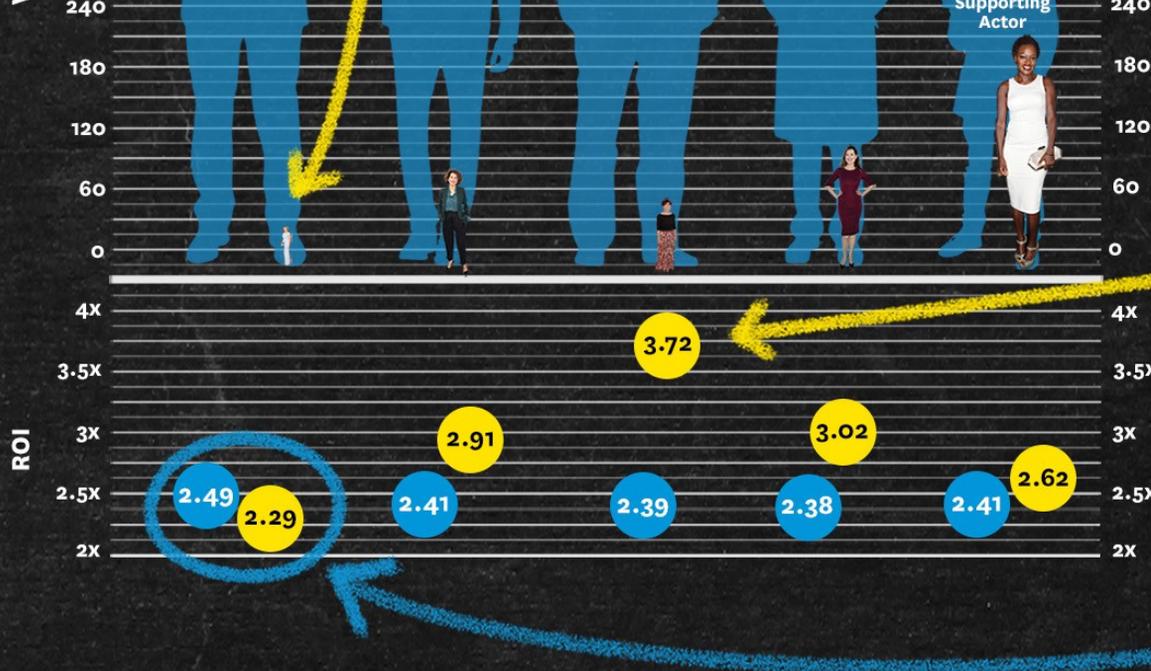
Not only do **MALE PRODUCERS, MALE WRITERS, MALE DIRECTORS** and **MALE ACTORS** enjoy larger budgets than women in the same positions, but they also command the lion's share of the production volume. This is true of both films that cost less than **\$25M** (chart to the left) and those that cost more (chart below). The relative number of films by men and women in each category is represented proportionately here by chart heights. The shadow figures in both charts represent men, again all scaled according to the number of films their respective categories account for.

Budgets more than \$25M



This disparity between men and women becomes even more striking with films at the more expensive end of the spectrum.

As evidenced by their minuscule representations here, an even smaller percentage of films are written, directed, produced and performed by



directed, produced and performed by women in films budgeted **above \$25M**. But the return on investment from those films is generally **higher for women** than it is for men. And considerably higher in the case of **FEMALE WRITERS**.

The noticeable exception, at both budget levels, are **FEMALE DIRECTORS**. Over this five-year period, their ROI trails the investment returns of **MALE DIRECTORS**.

The next few graphs examine the underlying data to see what potential factors can help explain this anomaly. We start by looking at screenplays. Is the material that women write less commercially viable than screenplays by men?

Slated Analytics applied its **SCRIPT SCORE** methodology to a dataset of 190 films to find out.

Script Score Formula

Slated Analytics' **SCRIPT SCORE** indicates the quality of the project's screenplay. The score is derived from three readers' ratings of eleven individual attributes of the script, is on a 100-point scale, and generally suggests the following:

- 90+ = exceptional in every way (awards worthy)
- 80+ = excellent (a true asset to the production)
- 70+ = above average (a solid blueprint for the film)
- 60+ = below average (continued development recommended)
- Below 60 = poor (needs significant improvement)

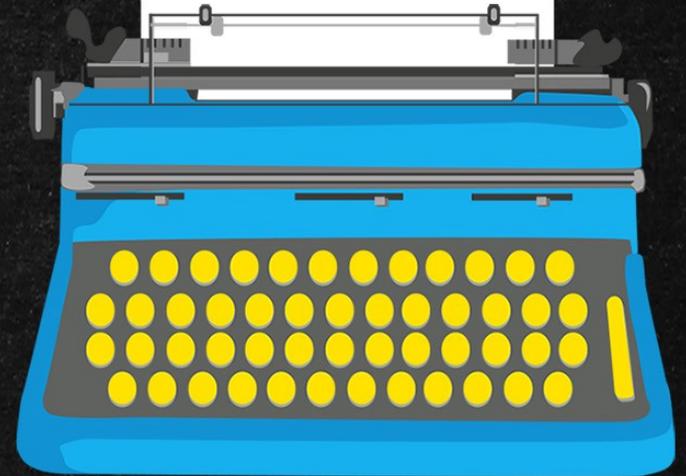
Overall Rating:

- SR = Strong Recommend
- R = Recommend
- C = Consider
- P = Pass
- SP = Strong Pass

Individual Ratings are on a **Scale of 1 to 5**, with 5 being the highest

Script Score 81

Readers	R1	R2	R3	Avg
Overall	R	R	C	
Premise	3	3	4	3.3
Originality	3	3	3	3.0
Dialogue	4	4	4	4.0
Structure	4	4	4	4.0
Character	4	4	3	3.7
Logic	4	4	3	3.7
Conflict	3	4	3	3.3
Tone	4	4	4	4.0
Pacing	4	4	3	3.7
Craft	4	5	4	4.3



Gender barely tips the Writing Scales

MALE WRITERS generated considerably more theatrical material than **FEMALE WRITERS**, a disparity represented here by the relative size of each circle. But the market potential for screenplays written by women is essentially the same as those written by men. Here you can see that the relative difference in their Slated **SCRIPT SCORES**, an industry-weighted measure

Male ■
Female ■

78.0

of a script's creative value, does not come close to the imbalance in their script production volume.

76.6

Script Score

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Financial Score Formula

Slated Analytics' FINANCIAL SCORE, a number from 1-100, indicates a project's financial prospects. A Financial Score of "80" equates to an expected ROI of "2.0". This calculation is based on a combination of a project's costs and its revenue projections.

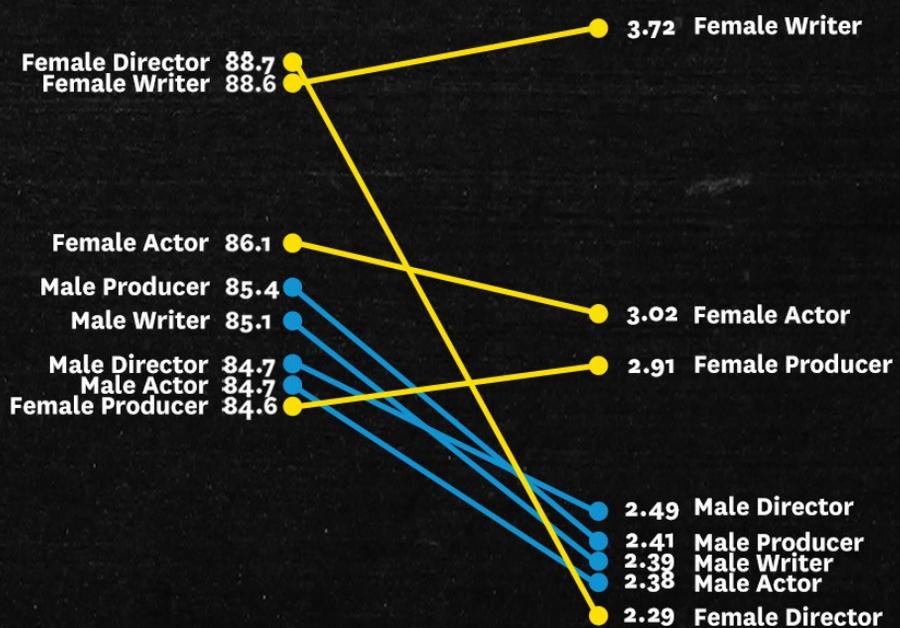
FINANCIAL SCORES

Next we looked for clues in the **FINANCIAL SCORES** of films. The higher the score for any given project the higher its expected returns on investment when released commercially. As you can see from the chart to the right and also the one immediately below, those projections correlate well with actual ROI for our sample size of 1,591 films. Where the biggest differences occur, however, are with women.

FINANCIAL SCORES

90
85
80

Budgets over \$25M



ROI

4.00
3.00
2.00

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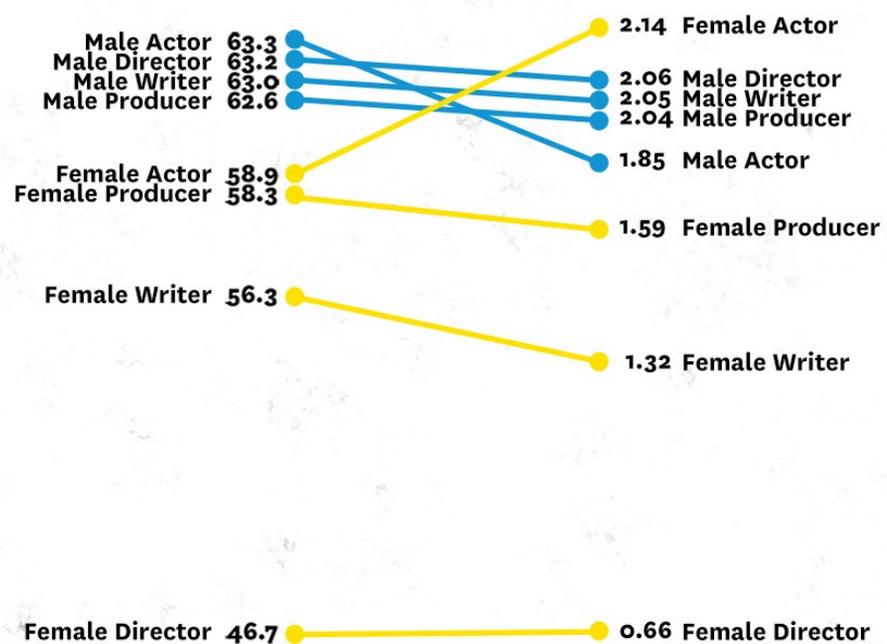
ROI

FINANCIAL SCORES

The fact that women are involved in far fewer films is certainly a contributory factor: Predictions become more accurate the greater the data-set. But more difficult to explain is why **FEMALE DIRECTORS** should come bottom of both ROI Charts, particularly since their Financial Scores predict that higher budget films made by women would outperform all other categories. Maybe

65
55
45

Budgets under \$25M



ROI

2.20
1.44
0.60

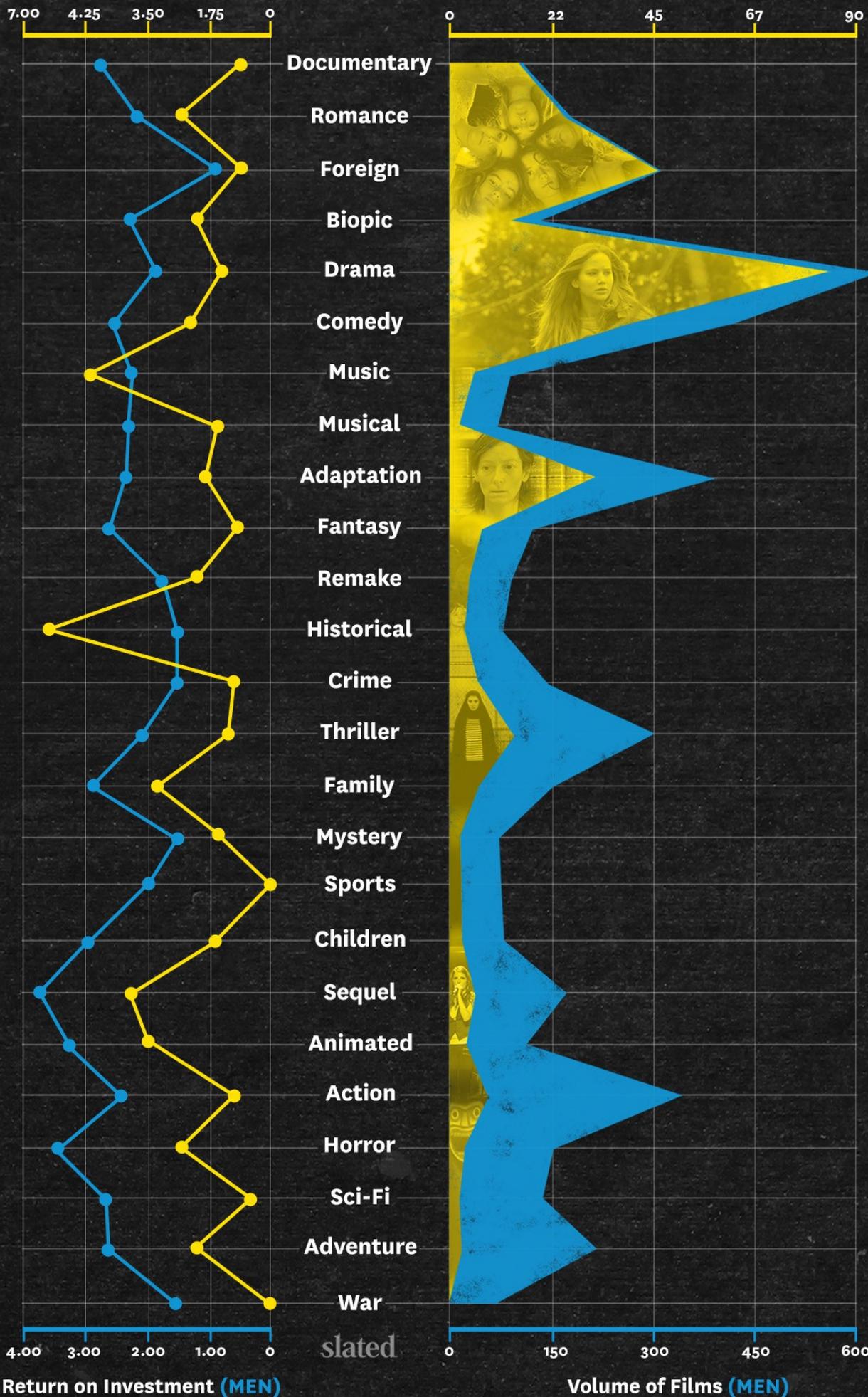
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ROI

Is This A Chick Flick Issue?

Return on Investment (WOMEN)

Volume of Films (WOMEN)



How much of an issue is **GENRE CHOICE?** Is it possible that the ROI on films directed by women is adversely affected by the types of films that **FEMALE DIRECTORS** are drawn to as filmmakers - or the material they are offered by the industry?

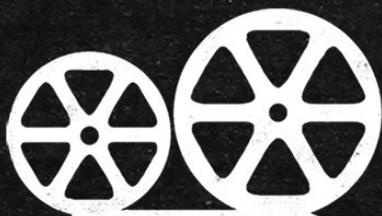
Hell, no.

In every genre far fewer films are directed by women than by men. But if you adjust for that discrepancy, you will see that the **VOLUME** of films made in each genre by men and women flexes up and down numerically in surprising synchrony.

So too does their ROI. The genres that you see listed to the left were ranked from top to bottom in terms of their relative popularity with **FEMALE FILMMAKERS** percentage-wise as compared with men. It is only when the sample size gets too small - as is the case with both **HISTORICAL** films and **MUSIC** films - that this ROI correlation starts to break down.

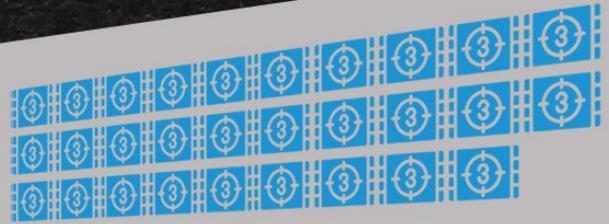
MALE DIRECTORS achieve a greater ROI consistency across genres. But this data suggests that **FEMALE DIRECTORS** would gravitate similarly towards each genre's mean if they were given more directing opportunities.

The Real Gender Culprit: SCREEN COUNT

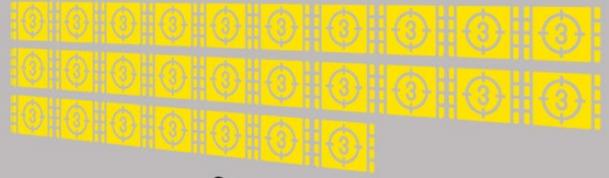


Budget

**More than
\$25M**



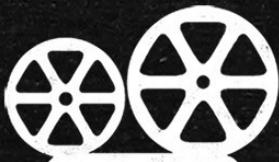
2870



2703

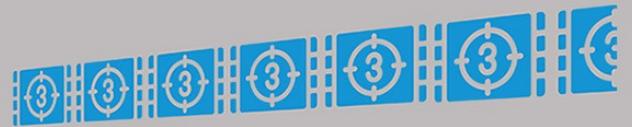
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After weighing up all the quantifiable variables, it turns out that the single biggest data point affecting the performance of women in the film marketplace, particularly directors, is the number of screens that their films play on. This imbalance is particularly egregious at the lower end of the budget spectrum where **FEMALE DRIVEN** films are seen on only a **THIRD** as many movie screens as **MALE DRIVEN** films. Implicit bias may be at play here across the marketplace. The fact that the average budget for women-directed films is also substantially less than the average budgets for films directed by men, implies an institutionalized lack of financial commitment that starts from the developmental stages of a film's life and extends all the way through to its theatrical exhibition. If the playing fields were evened out, data tells us that women would more than hold their own in the marketplace regardless of genre, budget, choice of material or job title.



Budget

**Less than
\$25M**



646



242

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Male ■

Female ■

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This post is part of our [filmonomics @ slated](#) series which looks at film financing and project packaging through the lens of statistical analysis. We use hard numbers and our own scoring algorithms to re-examine some of the foundational thinking behind the movie business.

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