

34.3 percent of IPOs are technology companies, of which 60.6 percent were backed by venture capitalists (compared to 39.9 percent of all IPO companies) for the 1980–2003 period. Therefore, investors purchasing stock in IPOs generally must be prepared to accept large risks for the possibility of large returns.

It is often observed that IPO shares open at a slightly higher price and close at a substantially higher price than the offering price at the end of the first day of trading (providing a significant return to the IPO participants with the allocated shares). This phenomenon is referred to as IPO *underpricing* or *leaving money on the table* and is observed not only in the United States, but also in other countries. A price run-up on the first day occurs when the demand exceeds the supply (the IPO is “hot” or the offering is underpriced).

The first-day return averaged 18.8 percent (the average daily market return is 0.05 percent) during the two decades prior to 2001. It decreased with the collapse of the bubble, but is still substantial at 12.1 percent. Although the first-day return is typically positive, IPOs have in general underperformed in the long run both in terms of stock returns and financial accounting results. Ritter and Welch (2002) report that the average three-year buy-and-hold returns (from the closing price of the first day) of IPOs underperformed by 23.4 percent (compared to the CRSP [Center for Research in Security Prices] value-weighted market index) and by 5.1 percent (compared to seasoned companies with the same market capitalization and book-to-market ratio). Smaller firms (in terms of sales prior to an IPO) appear to do much worse. Underpricing and poor long-run performance do not appear to be related in a systematic manner, however. Why do firms leave so much money on the table? Why do so many IPOs underperform? These questions are important subjects of academic inquiry in finance.

The academic accounting literature documents that many IPO firms engage in earnings management through an aggressive use of (discretionary) accruals to inflate reported earnings around the time of the IPO. Long-run underperformance is more pronounced for firms with more aggressive discretionary accruals (Teoh et al. 1998). Some IPO firms in R&D-intensive industries reduce R&D expenditures below the optimal level to increase reported earnings (Darrough and Rangan 2005). These findings suggest that some managers try and sometimes succeed to influence the perception of investors of IPO firms by manipulating accounting numbers.

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INITIATION RITES

SEE *Rites of Passage*.

INITIATIVE

An *initiative* (also known as a *popular initiative*) is a type of direct democracy (along with the *referendum* and the *recall*) in which citizens participate directly in governance, rather than indirectly by voting in elections. Initiatives allow citizens to propose a measure—either a statute or a constitutional amendment—by filing a petition with a specified number of valid signatures from registered voters. The measure is then subject to an up or down vote in the next election. The initiative is available in twenty-four states, about half of all U.S. cities, and in nations such as Ireland and Switzerland.

The initiative has existed in the United States since colonial times. It gained considerable popularity during the Progressive Era, when 83 percent of all states to adopt the initiative (20 of 24) did so between 1898 and 1918. Its emergence was closely tied to western populism, with 71 percent of initiative states (17 of 24) lying west of the Mississippi River.

The initiative was called upon frequently in the 1910s and 1920s, but its use slipped into a period of relative dormancy during the Great Depression. It recaptured the public's imagination again in 1978 with the passage of Proposition 13 in California, a controversial measure that cut the state's property taxes in half. The political success of Proposition 13 spurred conservative interest groups and legislators to pursue tax-slashing measures in numerous other states, such as Oregon, Nevada, and Florida.

Proponents of initiatives argue that they provide a practical means for citizens to get results on issues that

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their elected leaders fail to address. They also claim that initiatives help to educate citizens about public policy and the democratic process. Critics point out, however, that the initiative may empower special interests at the expense of the general public. While narrow economic interests rarely have the resources to mount successful initiative campaigns independently, well-organized citizens' groups may be able to win passage of new laws at the expense of minorities, the poor, and other disadvantaged populations.

Beyond their direct effects on public policy through the creation of new laws, initiatives have myriad indirect effects on citizens, interest groups, and political parties. For citizens, they help to stimulate voter turnout, cultivate civic engagement, and enhance trust in government. Interest groups may threaten to propose an initiative if the legislature does not do its bidding on a particular subject, thus enhancing the influence of such groups in policy matters. Political parties may invoke ballot initiatives as a means to achieve broader electoral objectives. For example, during the 2004 presidential election, Republican Party officials proposed initiatives banning same-sex marriage in critical swing states as part of an effort to promote voter turnout among conservatives sympathetic to President George W. Bush. Although survey evidence suggests that the marriage initiatives may not have had the effect that Republicans intended in 2004, their continued use in the 2006 midterm elections indicates that political parties now see polarizing ballot initiatives as a staple in their electoral strategies.

The debate over whether the initiative is beneficial or detrimental to democracy is unlikely to abate in the foreseeable future. While it is unclear which specific interests are most advantaged or disadvantaged by the initiative's existence, it is clear that savvy political actors will continue to invent ways to co-opt initiatives to advance their goals.

SEE ALSO *Ballots; Democracy; Democracy, Representative and Participatory; Interest Groups and Interests; Progressives; Referendum; Voting*

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INKBLOT TEST

SEE *Rorschach Test*.

INPUT-OUTPUT MATRIX

An input-output matrix, A , is a square table with elements a_{ij} , representing the amount of input i required per unit of output j . A column of the matrix depicts the inputs needed for the production of a specific output and, therefore, can be considered a technique. The matrix is a constellation of techniques. For example, if $A = \begin{pmatrix} 0 & 1/3 \\ 1/2 & 0 \end{pmatrix}$,

then the technique for product 1 is $\begin{pmatrix} 0 \\ 1/2 \end{pmatrix}$ (1/2 a unit of input 2 per unit of output 1), while the technique for product 2 is $\begin{pmatrix} 1/3 \\ 0 \end{pmatrix}$ (1/3 a unit of input 1 per unit of output 2).

If the list of inputs is complete, including factor inputs, the input-output matrix also contains “techniques” for the production of the factor services. In 1936, in the first input-output study, the Russian-born American economist Wasily Leontief (1906–1999) presented consumption coefficients for the “production” of labor services. This case is the so-called closed input-output model. If only produced inputs enter the input-output matrix, one speaks of the open input-output model.

The basic equation of the open model is the material balance, $x = Ax + y$, where x is the vector of gross outputs, Ax the vector of intermediate inputs, and y is the vector of net outputs. The latter comprises the commodity components of household and government consumption, investment, and net exports. The material balance can be solved to determine the gross outputs, x , that are required to sustain the production of alternative bills of final demands, y . The solution is obtained by applying the so-called Leontief inverse, $(1 - A)^{-1} = 1 + A + A^2 + \dots$, to the equation: $x = (1 - A)^{-1}y = y + Ay + A^2y + \dots$. The total output