# IPO Lock-up Agreements

## Perspectives from the U.S. and China

**Introduction**

A **lock-up period** (or **lock-up agreement**) is a set period of time when investors are prohibited from selling their shares. Lock-ups generally apply to hedge funds or initial public offerings (IPOs):

- *Hedge funds.* Lock-ups give fund managers time to exit investments that may be illiquid without driving prices down against their overall portfolio. Without a lock-up period the fund manager would need to set aside a large amount of cash which would take away from the available money to invest, thus lowering the potential return for investors.

- *IPOs.* For private companies looking to go public through an IPO, lock-ups prevent company insiders (i.e. founders, owners, managers, employees, friends and family, venture capitalists, institutional investors and other early private investors) from selling their shares for a fixed period of time immediately following the IPO. Once the lock-up expires, shareholders may freely buy and sell shares on the secondary market.

This article explores the role of lock-ups in the context of IPOs and examines the key differences in lock-up conventions between the U.S. and China (including Hong Kong). It concludes with a section on valuation considerations that practitioners should bear in mind when valuing shares subject to lock-up restrictions.

**Lock-up expiration**

A commonly cited reason for needing IPO lock-up agreements is that they prevent company investors, who own a disproportionately high percentage of shares compared to the general public, from flooding the market with sell orders at the start of its public trading and depressing the stock price. While lock-up provisions help to stabilise the share price near the IPO date, oftentimes this simply defers the inevitable sell-off activity to the lock-up expiration date. Indeed, in a recent example, the shares of **Airbnb Inc.** fell more than 6% in the first hour of trading as the company's post-IPO lock-up expired on May 17, 2021 (see the above graphic).

Source: marketbeat.com, Airbnb share price May 17-18, 2021

Since lock-up expirations represent publicly available information that is mentioned in the IPO prospectus, the **Efficient Market Hypothesis (EMH)** theory would suggest that when insider selling takes place after the expiration date occurs, the price impact should be negligible. However, negative price reactions around expiry of the lock-up are commonplace, implying that the market consistently fails to anticipate such predictable events. Several hypotheses have attempted to explain this phenomenon, including:

- *An increase in the proportion of trades executed at the bid price.* This results from insider sell orders on the unlock day.

- *Price pressure.* On the unlock day, a large flow of insider sell orders may temporarily depress the share price

- *Downward sloping demand curves*. When insiders sell their shares, the public is asked to hold a greater number of shares. If the public's demand curve slopes downward, this will result in a permanent share price fall.

- *Worse than expected insider sales*, i.e. the magnitude of insider sales consistently exceeds investors' expectations.

- *Venture capital effect.* The price drop is larger when the firm is financed by venture capitalists, as they tend to sell more aggressively compared to other pre-IPO investors due to the way their funds are structured (e.g. ten year fixed term).

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Empirical studies putting these hypotheses to the test have returned mixed results.

Given the possibility that markets are not rationally incorporating all public information into stock prices, lock-up periods therefore represent a genuine risk that most investors must face when diving into newly-public companies. Investors should therefore consider the following when making an investment decision:

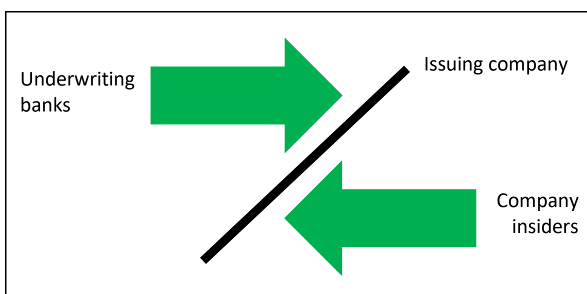
- Share prices often decline a few days or more prior to the expiration date as investors look to exit the stock before the new supply hits. The effect of **market overhang** (i.e. the number of shares that are outstanding but cannot be traded at the time of the IPO) is more pronounced in IPOs backed by cornerstone investors (see later).

- Larger IPOs sometimes adopt multiple lock-up periods so that the market isn't flooded with a huge new supply of stock in a single trading session.

- Lock-up periods are important because the trading behaviour of insiders can serve as a barometer, i.e. if insiders hold their shares perhaps they believe the price will rise, but selling shares may give the impression of a lack of confidence in the company's prospects.

**Lock-up agreements in the United States**

In the U.S., lock-up periods are not legally required by any regulatory body (e.g. SEC), nor by the exchange (e.g. NYSE). Rather, they started as *voluntary* agreements between the underwriter and corporate insiders that have now become the default standard ("**underwriter lock-up**"). Usually investors and employees prefer shorter lockups so they can cash out sooner, while the underwriting banks prefer longer ones to prevent insiders from dropping the share price. The company is often somewhere in the middle, wanting to keep employees and investors happy but not wanting to look like insiders lack faith in the stock.




Negotiating the length of the lockup period

The lock-up agreement typically specifies that insiders are not allowed to sell shares without the written consent of the underwriters during a specific post-IPO period. U.S. securities laws do however require a company using a lock-up to disclose the terms in its registration documents that it files as part of the IPO process, including the prospectus.

**Finding IPO lock-up clauses in the U.S.**

The EDGAR database provides free public access to corporate filings with the SEC. To register an IPO with the SEC a domestic company must file a *registration statement*, or *Form S-1*. The *IPO prospectus* is often a large part of the registration document. Subsequent S-1/As indicate an amendment to the Form S-1 filing, which may include any changes to the lock-up period(s). The equivalent registration statement for a foreign company is *Form F-1*[1]. Lock-up provisions can be found in the S-1 (or F-1) sections: (i) Shares Eligible for Future Sale; and (ii) Underwriting.

Most lockups in the U.S. last between 90 to 180 days, with **180 days** being by far the most common. The types of shareholders commonly affected include *Majority Shareholders* (own >50% voting shares), *Principal Shareholders (*own >10% voting shares) and *5% Shareholders* (own >5% voting shares). Lock-ups may also apply to *Selling Shareholders*, these are existing shareholders that directly receive the proceeds from the sale of their shares (rather than the company) if they registered their shares as part of the IPO.

Despite the popularity of the 180-day lock-up period, recently there has been a trend towards structuring lock-ups with different periods for different parties:

- *SPAC transactions.* In a SPAC transaction a newly formed company raises funds in the public markets via IPO, then uses the proceeds to acquire a private company. Lock-up periods for SPAC transactions are typically longer and more complex than traditional IPOs (e.g. **12 months** or more and with multiple time-oriented expirations).

  *For more information on SPACS, refer to our reports SPACs 2.0, SPAC 2.0 Update, and Space SPACs.*

- *Direct Listings*. In direct listings existing shares are made available for trading in a public market without an underwritten offering and thus, without restrictions imposed by standard lock-up agreements. Companies with track records of strong growth and healthy financials are good candidates for direct listings and can go public **without lock-up agreements**.

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**Tech IPOs: Facebooks lock-up agreement**

One of the most high-profile examples of a lock-up period occurred with Facebook, which listed on May 18, 2012 at $38 per share. The company used a staggered system with a total of five lock-up expirations:

| Lock-up (days) | Applied to: |
|---|---|
| 91 | 268m shares held by Selling Shareholders (mostly original investors) other than Zuckerberg. |
| 151 to 180 | 247m shares held by Directors and Current Employees other than Zuckerberg. |
| 181 | 1.2bn shares, 60m shares held by Zuckerberg. |
| 211 | 124m shares held by Selling Shareholders other than Zuckerberg. |
| 366 | 47m shares held by Mail.ru Group (a 5% Shareholder) and Digital Sky Technologies (a Selling Shareholder). |

Lock-ups have become increasingly complex and/or deviated from the 180-day standard, particularly in tech IPOs. Zynga, for example, had a 165-day lockup, and Zillow insiders could sell after 90 days if the company met certain milestones. Earlier exits may be negotiated by large investors with bargaining power. Lock-ups may also be waived in whole or in part by the lead underwriter at their discretion.

### Lock-up agreements in China

In mainland China, lock-up periods are required by the listing rules, which are set by the **China Securities Regulatory Commission (CSRC)** who approves all IPOs (with the exception of the STAR Market and until recently, ChiNext)[2].

**Finding IPO lock-up clauses in mainland China**

The website cninfo provides access to regulatory filings and disclosures of listed issuer information in mainland China. Lock-up provisions can be found in the following sections of the IPO prospectus: (i) Overview of the Offering; and (ii) Important Event Reminder.

**Finding IPO lock-up clauses in Hong Kong**

The HKEXnews database provides access to regulatory filings and disclosures of listed issuer information with the Hong Kong Exchanges and Clearing Limited (HKEX). To register an IPO with the Main Board or Growth Enterprise Market (GEM) of the Hong Kong Stock Exchange (HKSE) a company must file a *New Listing Announcement Notice* and *IPO prospectus*. As with the U.S., a huge number of Chinese companies are listed in Hong Kong[3]. Lock-up provisions can be found in the IPO prospectus sections: (i) History and Corporate Structure (sub-section "Pre-IPO Investments"); (ii) Substantial Shareholders; (iii) Cornerstone Investors; and (iv) Underwriting.

The listing rules for IPOs state that the following person(s) are subject to a **36 month** lock-up period: (i) *Controlling Shareholders (*own >30% voting shares), and (ii) *Actual Controllers* (defined as "a party which is not a shareholder of a company but exercises actual control over the company through an investment relationship, agreement, or other arrangements"). All other shareholders are generally subject to a **12-month** lock-up period. This "**statutory lock-up**" differs from the U.S. where lock-ups are primarily determined by the underwriters.

In Hong Kong, *Controlling Shareholders* are subject to lock-up restrictions under the Main Board and GEM listing rules:

- *Main Board Rule 10.07(1)*: the lock-up period is **6 months** plus an additional 6 months if a disposal after the first 6 month period results in the owner ceasing to be a controlling shareholder.
- *GEM Rule 13.16A(1)*: the lock-up period is **12 months** plus an additional 12 months if a disposal after the first 12 month period results in the owner ceasing to be a controlling shareholder.

**Dual-listing: Alibaba's lock-up agreement**

On September 19, 2014 Alibaba's IPO on the NYSE raised US$25 billion, making it the largest IPO in history. On November 26, 2019 the company achieved a secondary listing on the HKSE raising a further US$11 billion, making Alibaba the largest dual-listed stock globally.

U.S. listing:

| Lock-up (days) | Applied to: |
|---|---|
| 91 | 8m shares (<1%) held by a Convertible Preference Shareholder. |
| 181 | 437m shares (18%) held by Executive Officers, Directors, Partners, Employees, and Institutional Shareholders. |
| 366 | 1.4bn shares (58%) held by Jack Ma, Joe Tsai, Yahoo and Softbank. |

Hong Kong listing:

| Lock-up (days) | Applied to: |
|---|---|
| 90 | 1.9bn shares (9%) held by Directors and Executive Officers, including Jack Ma and Joe Tsai.<br>5.4bn shares (25%) held by Softbank. |

One of the reasons Hong Kong lost the initial IPO to New York was because at the time the HKSE prohibited companies with dual-class (or *weighted voting right*) share structures from listing[4]. Dual-class companies can issue share classes with different voting rights rather than the traditional "one share one vote" structure (e.g. "class A" shares with one vote per share and "class B" shares with multiple votes per share). This allows founders to exert greater control over their companies.

In recent years dual-listings have become popular with mainland Chinese technology companies. For example, Baidu, JD.com and Netease all followed Alibaba's footsteps and achieved dual-listing in the U.S. and Hong Kong. Whether this trend continues is now in doubt following the **Holding Foreign Companies Accountable Act (HFCA)** which President Trump signed in December 2020 and became effective in early 2021[5].

### Cornerstone vs pre-IPO investors

In Hong Kong, voluntary lock-ups are also agreed between issuing companies, pre-IPO investors, and cornerstone investors. Cornerstone investors are a class of investor that commits in advance (typically after submission of the listing application but before the roadshow and bookbuilding exercise) to invest in a fixed portion of IPO shares on a preferential basis. The allocation of shares to such

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cornerstone investors is guaranteed and they must invest at the IPO price.

In contrast, pre-IPO investments take place much earlier in a company's history, often taking the form of preference or convertible debt securities that are exchangeable into shares. While cornerstone investors are generally soley financially motivated, pre-IPO investors often have financial motives as well as operational or commercial expertise (including involvement in investee company strategic and management decisions via board representation) and invest on more favourable terms, e.g. directors nomination rights, veto rights, anti-dilution rights, profit guarantees, information rights, rights of first refusal or tag-along rights, liquidation rights, etc. Such special rights, granted on the account of the early (risky) nature of their pre-IPO investment, represents an unequal treatment of shareholders and are generally not permitted to survive after listing, to comply with the general principle of even treatment of shareholders under the listing rules (see GL43-12). The one term that does survive post listing is the IPO lock-up, which generally applies to both cornerstone and pre-IPO investors.

Cornerstone investors are usually large institutions and well-known individuals including asset managers, sovereign wealth funds, hedge funds and local tycoons. More recently, private equity firms have also been getting in on the action[6]. Cornerstone investing has grown in popularity since the global financial crisis, particularly in Asia, during a period when volatile equity markets made launching a successful IPO challenging. By guaranteeing that a portion of the deal is sold to prominent investors, cornerstone investing typically raises the profile of the offering by signalling confidence in the applicant, thereby attracting a wider pool of market participants to invest in the new shares and de-risking the IPO. In recent years, the existence of cornerstone investors has become essential to the success of IPOs in Asia.

Placings to cornerstone investors in Hong Kong IPOs are generally permitted provided that:

- The placing is at the IPO price.
- The IPO shares are subject to a lock-up period for at least **6 months** (typically the same as pre-IPO investors).
- There are no direct or indirect benefits provided to cornerstone placings (e.g. financial assistance) other than a guaranteed allocation.
- Details of the placing arrangement, including the identity and background of the investors and the amounts allocated, are disclosed in the listing document.

The terms of the cornerstone investment, including lock-up period, are defined in the *Cornerstone Investment Agreement (CIA)* between cornerstone investors and the issuing company.

While cornerstone investments boost confidence in the listing company, they've been criticized for draining liquidity post-listing by creating low liquidity in the public floats that deprive shareholders of trading and/or realizing their investments in the market. Another potential issue is that cornerstone lock-ups may attract lower quality investors who are less concerned about the restriction on their ability to trade the shares post-listing or even about the actual valuation of the company.

Finally, cornerstone investors should be distinguished from **anchor investors**, who place their orders during the bookbuilding process, and whose allocations are not guaranteed. Anchor investors are typically not disclosed in the prospectus and **not subject to lock-ups**.

**Valuation considerations**

The **International Private Equity & Venture Capital Valuation Guidelines (IPEV)** state that:

> *Discounts may be applied to prices quoted in an Active Market if there is some contractual, governmental, or other legally enforceable restriction attributable to the security, not the holder, resulting in diminished Liquidity of the instrument that would impact the price a Market Participant would pay at the Measurement Date.*

Since IPO lock-ups effectively prevent the sale of shares for a period of time, a hypothetical transaction could only take place if the lock-up accompanied the shares when sold to a buyer. Hence, the restriction is considered a characteristic of the asset as opposed to a characteristic of the holder and the lock-up feature should be considered when valuing the shares. Since market participants typically would not pay the observable Level 1 price for locked up shares, a **Discount for Lack of Marketability (DLOM)** should be applied. **FASB ASC 820-10-55-52** indicates the following:

> *In that case, the fair value of the instrument would be measured on the basis of the quoted price for an otherwise identical unrestricted equity instrument of the same issuer that trades in a public market, adjusted to reflect the effect of the restriction. The adjustment would reflect the amount market participants would demand because of the risk relating to the inability to access a public market for the instrument for the specified period.*

The discount should vary depending on the duration of the restriction (with the discount amortising to zero at the end of

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the restricted period) and the risk (volatility) of the price. As such, several **option pricing models** have been developed to estimate the DLOM, such as:

- *Protective Put (Chaffe, 1993).* The discount is based on an at-the-money European put option.
- *Asian Protective Put.* A variant of the Protective Put method, the discount is based on the average price over the restriction period rather than based on the final price.
- *Longstaff (1995).* The discount is based on a lookback style option.
- *Finnerty (2002, updated 2012).* The discount is based on an average strike put option.

The option pricing model valuation approach benefits from appropriately capturing the relationship between duration and risk. In addition, numerous studies have shown that option pricing models produce results that closely correlate with the limited observable market data.

According to **The American Institute of CPAs (AICPA)**, the most widely accepted of these methods are the Finnerty model and the Asian Protective Put. The **Asset Management Association of China (AMAC)** recommends that valuers use the Asia Protective Put method.

Estimating a DLOM is challenging, and none of these methods is completely satisfactory in all respects. Another aspect to take into consideration is the volatility of newly listed companies is typically unobservable and therefore a subjective factor (it may be estimated by reference to the volatility of guideline publicly traded stocks). The valuer should apply judgement and consider all facts and circumstances when deriving the DLOM using these models.

*For further discussion on the use of DLOM in valuing PIPE (Private Investment in Public Equity) securities and SPAC PIPEs, refer to our reports SPACs 2.0 and SPAC 2.0 Update.*

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Footnotes

[1] As of May 5, 2021, the U.S.-China Economic and Security Review Commission reported that there were 248 Chinese companies, including eight state-owned enterprises (SOEs), listed on either the NASDAQ, NYSE, or NYSE American with a total market capitalization of $2.1 trillion.

[2] The Chinese *approval-based IPO system* differs from the *registration-based IPO* system in the United States whose listing processes are shorter, more transparent, and more market-oriented.

[3] As of April 30, 2021, the HKEX reported that there were 273 *H Share companies* listed on the HKSE (Chinese companies incorporated in mainland China and listed in Hong Kong) with a total market capitalization of HK$6.9 trillion, and 172 *red chip companies* (Chinese companies incorporated outside of mainland China and listed in Hong Kong) worth HK$5.1 trillion. The equivalent numbers for GEM are: H Share - 19 firms, HK$2.3 billion; red chip - 4 firms, HK$0.9 billion.

[4] The HKSE since revised its rules in April 2018 to allow Main Board listing of "innovative companies" with WVR structures.

[5] The HFCA requires foreign companies to submit to inspections of their audits by the U.S. Public Company Accounting Oversight Board (PCAOB), disclose whether they are owned or controlled by a foreign government, and name any board members who are Chinese Communist Party (CCP) officials. A failure to comply could result in the company being delisted from U.S. stock exchanges.

[6] Private equity participation as cornerstone investors is controversial as it raises the question of whether private equity firms should be charging management and performance fees for making public market investments. Unlike private equity deals, cornerstone investors do not have governance rights and control (or at least significant influence) over their investee companies.

Bibliography

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