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# The Private Equity Secondaries Market During the Financial Crisis and the "Valuation Gap"

*(final version)*

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## 1. Introduction

After the fallout from the debt crisis in summer 2007, and even more so after the Lehman bankruptcy in September 2008, private equity investors (Limited Partners) made attempts to reduce their private equity exposure. But since their private equity investments were illiquid and committed to funds with a long investment horizon, they had few alternatives to rapidly downsize private equity investments. The best option was to try to sell private equity interests in the market for private equity secondaries, the informal market that allows Limited Partners (LP) to sell interests in private equity funds that had been rapidly growing in the preceding years. Financial institutions including Citigroup, ABN AMRO and AIG attempted to offload their private equity holdings through this market, followed by other investors, such as the Harvard, Yale and Stanford endowments. The sales pressure had a dramatic effect on the secondaries market, leading to its temporary freeze in early 2009.

The purpose of this paper is to analyze the functioning of this relatively young market during the financial crisis in the years 2008 and 2009. We argue that it is interesting to study this segment of the private equity industry and its (temporary) illiquidity to understand the effective liquidity of private equity investments during episodes of severe market duress.

For example, Lerner and Schoar (2004) describe illiquidity as a defining feature of private equity investments. They develop a theory postulating that General Partners (GPs) impose such illiquidity to select investors with the desired long-term investment horizon, and argue that General Partners require illiquidity beyond the level that is needed in strictly economic terms for screening purposes. While they present supportive evidence for their key predictions, the secondaries market tellingly does not appear in their paper (undoubtedly also because it was much less developed at the time of their writing). If Lerner and Schoar's argument is true, then the emergence of the secondaries markets is a disturbing innovation from the perspective of the efficient separating equilibrium that they stipulate, and potentially hampers its development. Other arguments in favor of illiquidity emphasize the value of committed long-term investors from the corporate finance perspective of portfolio companies, that are presumably shielded from the volatility of panic-prone secondary markets, as well as the option to make capital calls on behalf of financially constrained or distressed portfolio companies. We call this perspective the *illiquidity view.* The contrasting hypothesis, which we call the *efficient liquidity view,* is that secondary markets for non-tradable "alternative" assets are efficiency-enhancing because they allow investors to adjust their portfolio strategy, and to implement investment horizons that differ from those of the funded firms. In effect, the arguments in favour of secondary market liquidity for private equity investors are not fundamentally different from the arguments in favour of market liquidity in general, for example in stock markets.

More broadly, our analysis aims to contribute to the understanding of the nature of liquidity and illiquidity in non-tradable asset markets in general. The secondaries market in the private equity industry offers perhaps the most intriguing laboratory to study this issue. The rise of non-marketable assets in professionally managed portfolios over the last fifteen years owed much to the belief that the absence of market liquidity carried desirable diversification benefits and a sizeable return premium since investors in need of funding liquidity would be unable to sell assets (Brunnermeier and Pedersen, 2008), a view for which investors could readily find sympathetic academics and supportive empirical evidence (e.g., Longstaff, 2004). As a consequence, many large and patient investors made "alternative assets", i.e. investments in illiquid assets with long-term payoffs, a sizeable part of their portfolios, as epitomized by the "Swensen model" of the long-term chief investment officer of the Yale endowment (Swensen, 2009).

Our key findings are as follows. First, we document that the secondaries market indeed followed the development of the crisis very closely. Many LPs tried to reduce their private exposure even before the crisis hit its cataclysm in September 2008; the large number of potential sellers caused a rapid drop in the prices for secondaries stakes. The effective liquidity of the market contracted sharply, with the deal volume in the first quarter of 2009 falling to $1-2bn, only a fraction of that in the comparable pre-year period. The liquidity freeze became most visible in the form of a widening valuation gap, i.e. discrepancy between the ask price of potential sellers and bid prices of potential buyers, that reached a peak of approximately 85% relative to bid levels in the first half of 2009, while at the same time the flow of concluded secondaries deals screeched to a halt.

Second, we argue that the particular form of illiquidity in the secondaries market can be best understood as the cumulative effect of behavioral and accounting-based elements. The accounting-based origins can be illustrated by the so-called “denominator effect”, which describes the mechanism that following a drastic correction in the capital markets for tradable assets, investors experience a sharp drop in the value of their overall portfolio (the “denominator”), but a much slower contraction in the accounting value of illiquid investments such as venture or buyout funds and real estate (the “numerator”), since the latter are buoyed by lagged accounting-based fund valuations that exist precisely because these asets are non-tradable and, therefore, cannot be marked to market. In some cases, LP’s nominal exposure to private equity even increased because of new drawdown requests, which reinforced the desire to sell. Such a denominator effect is precisely what happened during the crisis period in 2008 and 2009.

We suggest a behavioral explanation for the puzzling phenomenon of the valuation gap, the widening gulf between seller and buyer valuations, based on framing and loss aversion. The behaviour of sellers can best be understood as choosing accounting-based valuations as their reference points, whereas buyers anchored their valuation on forward-looking market valuations guided by liquid capital markets. The accounting-based valuation lags helped to reinforce these valuation discrepancies between sellers and buyers because both it allowed the participants on both sides of the market to chose different anchors for their valuations. We argue that the emergence of these asymmetric behavioral biases is plausible in the context of the institutional framework, and the need of fund managers on both sides of the market to interact with their respective constituencies, i.e. fund investors. Our explanation is similar to behavorial arguments that have been made in the context of other non-tradable asset markets, such as real estate, in order to explain why price adjustments are slow and seemingly inefficient (e.g., Akerlof and Shiller, 2009). Diverging buyer and seller perspectives led to the large valuation gap as the visible sign of illiquidity, as sellers were not willing to accept such steep discounts for their investments.

Third, we argue that the remarkably quick recovery of the secondaries market is even more noteworthy than its temporary breakdown in early 2009, given the informal nature of the private equity secondaries market and the built-in reaction lags in a market for non-tradable assets. Deal volume improved quite rapidly in the second half of 2009; it attained for all of 2009 a volume of \$12bn, only 25% below the total volume in 2008. The valuation gap was steadily closing in the second half of 2009 as well, and continued its recovery to attain a level of 5-10% in 2010, very close to pre-crisis levels. In fact, the resurgence of the secondaries market occurred in lock-step with that of stock markets that turned around in spring 2009 and saw significant and sustained gains from mid 2009 onwards. We do not detect any significant difference in the recovery speed of both markets, and we conclude that the turbulence in the secondaries was not any more pronounced or protracted than that in the stock market. We argue that this resilience is remarkable, considering (i) the opacity of PE portfolio companies relative to listed companies, (ii) the complexity of the valuation of PE fund stakes, with their built-in short option positions in the form of possible future capital calls, and (iii) the limited number of market participants and the effective barriers to entry for potential arbitrage traders.

Overall, our study corroborates the view that the secondaries market has proven itself in an unprecedented crisis as an efficient and by and large reliable component of the private equity industry. This is probably a positive development from the point of view of market efficiency, since the financial crisis gave rise to observations in fund flows that support the efficient liquidity view, and contradict the illiquidity view. According to the illiquidity view, *ceteris paribus* the tightening liquidity in the secondaries market should make fundraising easier, and hence also encourage capital calls. As we discuss below, quite the opposite happened during the financial crisis, so that the *prima facie* evidence on correlations lends some credence to the efficient liquidity view.[3] Hence, it appears plausible that the secondaries market plays a positive role in the provision of liquidity to private equity investors. It allows them to expand their exposure to private equity as they can rely on a relatively resilient market to sell positions in private equity funds or stakes in private companies, and to change portfolio strategies or to adjust their exposure to specific funds or the private equity industry as a whole in an efficient way.

The remainder of this paper is organized as follows. Section 2 provides a short introduction to the evolution of the market for private equity secondaries. Section 3 analyzes the evolution of the secondaries market during the Financial Crisis. Section 4 provides an outlook on the market, based on literature and a survey of specialists in the secondaries market, and Section 5 concludes.

[3] We hasten to add a big caveat: it is evident that there are many confounding influences that would have to be properly controlled for before any statement on causality can be made in a credible manner.

## 2. The Market for Private Equity Secondaries

The most common type of transaction in the secondaries market is the transfer of a private equity fund stake (or "interest") from one LP to another. The buyer pays a negotiated price to the exiting LP and assumes all future cash distributions as well as any residual commitment from future capital calls by the GP. The private equity secondaries market originated in 1982 when Dayton Carr founded the Venture Capital Fund of America (later the VCFA Group), the first investment firm to purchase private equity investment stakes. After a relatively slow start, activity in the secondaries market received a boost after the dot-com crash in 2000, when many investors sought early exits from their outstanding commitments, in particular in venture capital funds. Large financial institutions such as Deutsche Bank, Abbey National and UBS sold their entire private equity portfolio. While only $4bn were raised worldwide by secondaries funds during the entire 1991-1997 period, volumes rose to approximately $7bn in 2003 and $8.4bn in 2004, and the activity in the secondaries market as a proportion of private equity commitments increased from 2-3% to 5% (see Figure 1)[4]. By 2007, transaction volumes had grown to $13.3bn.

After the collapse of the internet bubble, many LPs faced liquidity pressures due to losses on their portfolios of listed equity, which translated into an inability to meet drawdown requests by GPs. It would be misleading, however, to attribute the growth in the secondaries market solely to distressed sell-offs. On one hand, the actual number of distressed sellers turned out to be smaller than many market participants had assumed initially. Liquidity needs were mitigated by the fact that during the worst period of the crisis, the levels of investment-related drawdowns were very low. On the other hand, liquidity needs and distress were not the only reasons to sell: with the emergence of private equity and other illiquid alternative assets as a substantial portfolio segment of many well-managed institutional asset portfolios, with over $1.7 trillion raised in the period 2005-2009 (according to Venture Economics data). Exit options became an essential tool for the rebalancing of portfolios, for the implementation of changes in investment strategy, and the management of LP-GP relationships.

[4] Vaughn, and Barrett, 2003; Rossa and White, 2007; The Industry Standard, 2001. All figures are in the Appendix.

Accordingly, from 2003 to 2008, alongside the primary PE market boom, there was a surge in secondaries market activity, marked by the transformation of the secondaries market from a small niche into a well-functioning segment of the private equity industry and the entry of new dedicated players. After 2004, the secondaries market achieved greater liquidity, and the assets of the best funds traded at or above their net asset values (NAV). Over the same period, new types of transactions besides the dominant LP-to-LP sales emerged: "early secondaries" (interests in funds which are <50% funded), "secondary directs or synthetics" (sales of portfolios of direct investments in operating companies, rather than interests in PE funds), "stapled transactions" (sale of a bundle consisting of an interest in existing funds as well as a commitment to new funds by the same GP), "GP spin-outs or tail-ends" (sale of interest in a new limited partnership set up to hold a portfolio of direct investments) as well as "structured transactions" in which the seller typically keeps some or all of the existing investments but the buyer takes over all future capital calls.

At the same time, the seller population, hitherto dominated by distressed sellers, became more diversified. For example, in one survey (Almeida Capital, 2006) more than 50% of LPs responded that one of the reasons for considering secondaries sales was to dispose of poor performers and to reinvest capital into better performing funds, or to reinvest into funds operating with a different geographical focus or in a different market segment, e.g. mid-market funds instead of large buyout funds. According to a recent survey, the most predominant types of sellers are private equity fund of funds (38% of sold investments), family offices (25%) and banks (18%), with asset managers, endowment plans and pension funds sharing the remaining 19% in equal proportions (Elm Capital, 2010).

To characterize the buy side, it is useful to start with the reasons that make the secondaries market attractive for dedicated buyers. First, since secondaries investors tend to purchase interests that are already largely funded, typically at least at a 50% level, they expect a considerably shorter time to break even (also expressed as the length of the J-curve), a smaller risk (given the greater visibility of mature investments), and a higher liquidity of the investments (due to the shorter maturity), compared with primary PE investments. Second, secondaries buyers are attracted by the promise of higher risk-adjusted returns. According to Preqin, upper quartile secondary funds of 2001, 2002, 2003, and 2004 vintages have returned respectively net IRRs of 23%, 25%, 34%, and 22% (Preqin, 2010), which is large considering the lower risk profile compared to buyout funds.

Third, secondaries investors expect an advantageous cash flow profile: they are able to reduce risks through diversification by creating portfolios that are typically more diversified with respect to vintage year, geography and investment styles than primary investments, and the right skewed distributions of private equity returns and multiples means that they need a smaller inventory of liquid assets to meet future capital calls.[5] Finally, as contrarian investors, secondary funds expect a smoother intertemporal return profile: in bear markets, they can opportunistically acquire LP stakes at strong discounts (relative to reported NAV); in a bull market, secondary funds are able to benefit from the relative maturity and liquidity of the underlying investments, and to exit quickly through IPOs or trade sales when market valuations are high.

With the growth of secondaries market, the population of buyers has considerably evolved in number and diversity. Besides dedicated or specialist secondaries funds, it also includes a large number of opportunistic investors that invest into secondary stakes in an occasional and non-systematic way. Players can, as of 2011, be categorized into five main groups: (1) Large cap and medium cap dedicated buyers that invest globally; (2) large cap fund-of-fund buyers; (3) small cap dedicated buyers; (3) small cap fund-of-fund buyers; and (5) non-traditional opportunistic investors, including pension funds, primary private equity players, sovereign wealth funds, insurance companies, family offices, endowments (e.g. universities), foundations and General Partners (GPs) themselves.

Small cap buyers typically focus on a single LP interest transaction, and might not have the resources to make subsequent investments or manage portfolios assembled from several LP interests. In addition, small cap fund-of-funds also manage a broad private equity platform. The role of these small players is in part explained by the fact that GPs often have a large influence in the selection process of new owners of LP interests; they may favour specialists with a more proven track record

[5] The maturity of secondaries affects the cash flows and NAV of the investor's whole portfolio. Distributions of secondaries can be expected earlier, and therefore they can fund capital calls of primary funds with lower cash flow requirements for the investor.

and the promise of a constructive LP-GP relationship is an important success factor in closing transactions.

Sellers value confidentiality and seek “quality buyers” that fit the objectives of the seller and have the capability to execute a deal within a short time frame. These demands also prevent that information is disseminated and the emergence of non-competitive behaviour among buyers.

## 3. Liquidity in the Secondaries Market during the Crisis and the Valuation Gap

In this section, we analyze the evolution of the market for private equity secondaries during the financial crisis that started in summer 2007. Our analysis proceeds chronologically, starting from the immediate pre-crisis situation in 2007, until 2010, focusing in particular on market illiquidity during the core crisis period. This section as well as the following section draw heavily on information and assessments provided in interviews that we conducted in 2010 with a diverse group of professionals active in the secondaries market.

### A. Pre-crisis and institutional factors

During the PE primary market boom in 2007, secondary bids ranged from 80 to 105% of NAV and were at their highest levels since 2003 (as shown in Figure 2). The corresponding prices sought by sellers were approximately 110% of NAV, leading to a valuation “gap”/median bid-ask of ~15%, and a deal volume of $13.4bn. At the same time, the NAVs reported by GPs during 2007 and half of 2008 were stable and remained approximately unchanged. The high bids and small pricing spreads bids and asks that occurred in 2007 can be traced to (i) high confidence in economic conditions and the future expected performance of underlying portfolio companies; (ii) liquid markets for exits through IPOs or trade sales, (iii) favorable credit markets for the refinancing debt-and-equity transactions; and (iv) the positive average track record of GPs of large buyout funds who managed to exit or recapitalize portfolio companies within only 2-3 years.

### B. 2007 and 2008: the slide and subsequent abyss

From the perspective of the secondaries market, the first 16 months the crisis in 2007 and 2008 can be divided into three periods that begin and end with three key events: the beginning of the subprime crisis in August 2007, the deterioration of markets after the collapse of Bear Stearns in March 2008, and the virtual freeze of markets and economy after the events of September 2008, marked by the Lehman bankruptcy and the bailout of AIG.

In the second half of 2007, the crisis was not immediately reflected in the pricing, liquidity or activity in the secondaries market. Throughout 2007, the average price of secondaries transactions contained only a 20% discount to NAV. But this pattern of delay and denial exactly mirrored what happened in public equity markets, with the Dow Jones reaching an all-time high in October 2007. The situation only changed in early 2008, around the Bear Sterns collapse, and it was reflected in declining pricing in PE secondaries. Median bids fell to 75% of NAV in the first half of 2008. A very marked further deterioration occurred in the second half of 2008, when prices for secondaries fell to 55% of NAV due to the devastating effects of the financial meltdown. But even then, "ask" prices were only slightly adjusted to 100% in H1 and 80% in H2, resulting in a aluation "gap" of approximately 25% (up from about 15% in 2007). But in spite of the dramatic increase in the valuation gap, deal volumes in 2008 reached $16bn, mostly driven by distressed sellers facing liquidity constraints who sold their private equity interests at steep discounts.

After the full extent of the financial crisis became clear to everyone as 2008 drew to a close, and in view of the large number of PE assets on offer and the increase in deal volumes, secondaries players widely expected many more limited partners to sell their interests, and they expected a "secondaries boom" in 2009. But serious headwinds became apparent in the final months of 2008. First, the shockwaves rippling through financial markets after the demise of Lehman Brothers required the full attention of investors, leaving little time to manage the private equity component of their portfolios. As a result, sales activity by non-distressed sellers slowed down, and little sales interest emanated from this group. Secondly, low levels of drawdowns by GPs due to very limited investment activity mitigated the liquidity pressure on LPs, allowing many of them to hold on to their private equity investments. As a result of the reduced pressure on sellers to sell their private equity stakes, the valuation gap continued to widen, marking a further deterioration in the liquidity of the secondaries market.

C. First half of 2009: calamity

In the first half of 2009 investor confidence and economic activity remained extremely weak. Leading stock markets continued their dramatic slide, losing between 35% and 60% of their pre-crisis levels. Due to this uncertainty, bids from secondary buyers (especially traditional buyers) fell to historic lows with median bids of 35% of NAV and high-low bid spreads of less than 10%, showing a high concentration of low bids. Sellers on the other hand adjusted their ask price only marginally, to 65% of NAV on average. In many cases, the inertia to mark down ask prices can be attributed to hopes that economic conditions would improve quickly, fueled e.g. by better-than-expected company reports in March/April 2009. As a result, the valuation gap in the first half of 2009 reached its peak, which meant that almost no agreement was possible among most sellers and buyers. Instead of moving towards the level of buyer bids, many sellers simply decided to hold on to their investments or to delay transactions. The illiquidity in the private equity secondaries market reached its peak.

Simultaneously, public equity markets continued to decline which significantly reduced company valuations vis-à-vis the peak prices paid in 2005-2007 by large buyout funds. This affected reported NAV valuations, and gave rise to the expectation of future write-downs because of the lagged nature of reported asset values. In fact, year-end valuations lagged public market comparables: whereas the S&P 500 fell by 37% during the full year 2008, GPs wrote down their NAVs by only 25% over the same period. While this is a hefty write-down, the lagged nature of reports was apparent. Consequently, potential buyers forecast much lower NAVs over the subsequent quarters; they bid in anticipation of these future valuation forecasts rather than reported historic NAVs. As a result, an ask price by a potential seller during the equity market lows in March 2009 since it is typically referenced to a relatively high (lagged) NAV of December 2008 may appear as a large discount, when in fact the discount would be much lower if the NAV was already fully written down, based on March 2009 multiples of comparable companies. The lagged nature of accounting-based valuations is of crucial importance to understand the seemingly large discounts to NAV offered by specialist secondary buyers during this period, and the nature of the valuation gap.

D. The Valuation Gap: A Behavioral and Accounting-Based Explanation

Based on our interviews, we come to the conclusion that lagged valuations also played their part in the increase in the valuation gap, since buyers and sellers had to justify their valuations to different constituent investors, and these audiences tended to frame their perceptions with respect to different reference prices: while investment committees of sellers tend to look at NAV to gauge their losses, investors on the buy side tend to regard equity prices of listed stocks as the suitable price reference for expected future valuations.

In fact, traditional buyers in the secondaries market (dedicated players and fund of funds) were extremely selective in their choice of assets and aggressive in their pricing. As a result, most volume in this period was generated by opportunistic investors entering the secondary market for the first time. Another development during the first half of 2009 was the shift in the bid prices offered by buyers in favor of more funded positions (Cogent Partners, 2009). During periods of high volatility on financial markets, mature and largely funded portfolios are more appealing to buyers as final asset values and returns are much more predictable. In fact, after receiving lower than expected bids in the first quarter of 2009 from buyers that offered a higher overall discount to compensate for large future capital committments and lower asset visibility, sellers adjusted their secondary offerings in the second quarter to include interests with higher levels of drawdowns in an attempt to increase bid levels.

The increase in buyer preference in favor of more funded positions becomes apparent when comparing discounts to NAV by fund age. Notwithstanding idiosyncratic variations in GP performance reflecting the nature of the underlying assets, or asset leverage positions, the average discounts exhibited a clear pattern as a function of the vintage year: at the end of 2009, bids for buyout interests ranged from 32% to 50% of NAV for funds of 2005 vintage, 2% to 45% for 2006 vintage, 20% to 40% for 2007 vintage and an astonishing low range from -112% to 19% of NAV for 2008 vintage (Preqin, 2009). Negative prices, as shown in the lower bound of bids for 2008 vintages, mean that buyers actually demanded that cash-strapped sellers pay them for the privilege of taking over future capital commitments. This is clear testimony to the difficulty that buyers face when valuing interests in funds with a large portion of unfunded commitments.

Sellers reacted to these low bids for stakes in young funds by offering more mature positions for sale. As a result, funding ratios of portfolios on sale increased from 59% in Q1 2009 to 69% in Q2 2009. In addition, potential buyers experienced severe difficulties in determining reliable valuations of private equity portfolios. Not only were portfolio companies severely impacted by the global economic slowdown, but the unprecedented volatility of markets made it impossible to understand what the right "comp" level was, since most companies were valued through comparables.

But probably even more devastating for the attempt to determine valuations was the fact that portfolio companies were particularly affected by adverse credit market conditions due to their aggressive leverage ratios. Many acquisitions made at the peak of the private equity primaries boom, at high valuation multiples (average of 8.4x in 2005, 8.4x in 2006 and 9.7x in 2007) were increasingly financed by debt and in 2009 faced refinancing risks as well as covenant breaches. It became difficult to forecast the effect of a fall in estimates for top-line growth combined with adverse credit markets on the refinancing option of highly indebted portfolio companies. Breaching of such covenants (DSCRs) had serious implications, such as the risk of triggering a "stepping-up" of the cost of debt that could force the GPs to inject more equity in order to obtain the consent of LBO banks to enter renegotiation about debt levels, debt maturity and covenant clauses.

Finally, valuations were hampered by extremely volatile markets that rendered the outlook on exit options for potential investments highly uncertain. From the second half of 2008 and into 2009 and beyond, many companies were forced to delay or cancel their IPOs. M&A activity was very weak, with total worldwide M&A volume falling from $5.61 trillion in 2007 to $4.242 trillion in 2008 and $3.621 trillion in 2009 (Zephyr, 2009).

For many sellers, a desire to keep realized portfolio losses at a minimum provided a strong motive to hold on to their private equity investments and to maintain high ask prices in the secondaries market. Thus, the reluctance of sellers to adjust ask prices is consistent with the well-known "disposition effect" that plays a prminent role in behavorial finance, which says that investors tend to hang on to losers instead of realizing losses. Portfolio managers of institutional investors that in principle would have an interest to sell needed to present their case for selling to their institution's investment committee. An obvious reference point in such presentations is the question whether the investment could at least break even: if it could, then performance did not look so bad given the difficult environment, and managers were more eager to go ahead with the sale of the interest. If, however, a sale would mean that the investor realized a negative rate of return, seller managers would appear in a poor light, and would be less likely to proceed with the sale and subsequent write-off. Therefore, the decisions to sell also depended to a large extent on the investor's book value that was the reference point for investment committees. As a consequence, investors that were willing to sell at a steep discount to NAV were mostly those that were forced to sell because they faced a liquidity squeeze. This was the case for some distressed banks that were forced to unwind positions as a result of the involvement of governments and regulators.

Furthermore, the fall in equity markets meant for many diversified institutional investors that the value of PE holdings as a fraction of overall asset value rose, an effect that we already introduced as the denominator effect. Whenever target allocations were breached or not re-negotiated, a minority of sellers was forced to sell at deeply discounted prices. Clearly, the lagged nature of NAV valuations leads to asynchronous value adjustments of traded and non-traded assets even if the underlying expectations about future cash flows do not differ plays an important role in the occurrence of denominator effects.

A key insight of the widening valuation gap during this period is that in periods of rapidly fluctuating asset valuations, the lagged nature of accounting-based valuations reinforces valuation disagreements between buyers and sellers in non-traded asset markets such as private equity investments. These effects show that the secondaries market can only be an imperfect substitute for truly liquid assets that provide daily marked-to-market valuation of traded assets.

E. <u>Concerns about fund manager continuity</u>

Another concern of buyers was the stability of GPs managing the funds they are investing in. According to one study (Meerkatt and Liechtenstein, 2008), up to 50% of GPs where expected to go out of business in the following 3 to 5 years, as they were seen as unable to secure investor money for follow-up funds due to their poor track record. We studied several cases in which concerns about GP instability between summer 2008 and 2009 played an important role. To note just one example, in March 2009 Candover Investments plc, a listed British investor in leveraged buyouts, was forced to cancel its commitment to invest €1bn in its own group's latest private equity fund for lack of liquidity, leaving the fund's capital at €2bn, short of the initial target of €5bn. As a result of this forced pull-out, the new fund's other largest investors decided to terminate the fund all together, triggering a specific clause in the Fund Rules that allowed them to accelerate the liquidation of the fund. Material adverse change clauses ("MAC") were also triggered when key individuals/GPs left, allowing investors to withdraw their capital commitments (e.g., Pai Partners and Alchemy Partners). Such clauses are typically not a problem during periods of strong private equity performance because managers are typically locked in by their share of the funds' profits or carry. However, the clawback clauses in many LP-GP contracts stipulate that GPs first need to earn back the missed hurdle rate before they earn carried interest, meaning that after poor performance it is rational for for GPs to leave. The financial crisis demonstrated that GP incentive schemes were not sufficiently robust to widely fluctuating markets and led to secondary buyer concerns about GP stability.

F. Second half of 2009: Recovery

In the second half of 2009, public equity markets recovered; the S&P 500 increased by 59% and the Eurostoxx 50 by 63% from March 2009 to year end. This led to a parallel and fairly immediate rise in the pricing in the secondaries market, sustained by a growing belief of market participants that the steep illiquidity discounts that buyers had extracted during the first three quarters of 2009 were no longer justified. Also, the higher valuation of traded assets and listed stocks in particular eased the liquidity pressure and denominator effect on investors. As shown in Figure 4, the median bid for buyout interests increased from 43% in the second quarter to 57% of NAV in the fourth quarter, whereas venture capital interests increased from 56% to 61% during the same period.

After four consecutive quarters of weak market activity (from 3Q 2008 to 3Q 2009), market developments underlined the narrowing of the valuation gap, thanks to improved market sentiment, as well as the increased appetite of secondary market specialists. These drivers had a strong impact on the $12bn deal volume in all of 2009. The fact that it was only slightly lower than the $16bn volume in 2008 (and the large volumes expected) owes much to an improvement in deal conclusions in the second half of the year. When analyzing the characteristics of the portfolios on sale, we also see changes during the second semester of 2009 that indicate a return to more normal conditions. Funding levels increased to 73% in the third quarter, but then declined to 46% in the fourth quarter as buyers seemed to be willing to offer better ask prices for LP interests with higher proportions of unfunded assets.

Another indicator of converging price expectations between buyers and sellers is the number of days taken for the price execution and settlement of secondary transactions. The time lag between sales offerings and deal conclusion in the secondaries maket declined dramatically (Figure 5). It averaged only five days before price execution plus another 30 days before settlement occured for a total of 35 days in market on average in the fourth quarter, compared with 182 days at the beginning of the year. This shows how improved economic visibility improved the ask prices offered by buyers, to levels that were significantly more in line with seller expectations. As a result transactions in Q4 2009 would seem to take less time to complete reflecting a general improvement of market conditions and improved sentiment by secondary players on the outlook for these assets.

G. <u>2010: Consolidation</u>

The more upbeat development during the second half of 2009 carried on into 2010. In April 2010, AXA Private Equity bought 60 investments in US buyout funds from Bank of America for $1.9bn, at a tiny discount of only around 10% to NAV. This secondary transaction represents the largest deal since the beginning of the crisis, and the second largest at the time after the sale of a $2.1bn PE portfolio by Calpers to a consortium of buyers in 2007. A 10% discount on such a large portfolio of assets shows that both buyers and sellers had more visibility on market conditions and on how much such assets were worth. Given that $80bn estimated worth of assets were on sale in 2009, and that more private equity interests were expected to be sold on the secondary market (e.g., from banks reducing their exposure to private equity due to regulation on banks' principal investing activities and stricter capital-requirements), transaction volumes continued to strongly increase to a record level, and pricing conditions continued to improve in the following months.

Several of our interview partners reported that they were observing transactions at modest discounts of 10-20% to NAV in 2010, and they expected discount to remain steady or to go down even further in the near future. These investments and the number on the valuation gap and the executed deal flow in our figures show that the normalization in the secondaries market continued from the second half of 2009 into the first half of 2010 and beyond, in parallel to the evolving market conditions for traded stocks.

### H. Summary

To summarize our assessment on the basis of our interviews, the main reason why buyers offered low bids during the core period of the financial crisis was the difficulty to pin down reliable valuations. Besides, low bid levels were also caused by the large portion of highly unfunded assets, and concerns about GP stability. Our analysis reveals the problematic role played by the lagged and accounting-based nature of NAVs reported by GPs that gave rise to diverging reference points and disputes about appropriate write-downs. The large discounts demanded by buyers meant that sellers tended not to sell their interests, since they often used a zero rate of return as a reference point for an acceptable minimum performance, and wanted to avoid large write-offs.

Given the severe stress in the secondaries market between the third quarter of 2008 and the summer of 2009, its recovery and return to almost normal conditions was remarkably smooth. This development was explained by several factors: first, as markets for traded equity recovered in the second half of 2009, the denominator effect eased, and fewer investors found themselves over-exposed to private equity. Many LPs, such as the large university endowments of Harvard and Stanford, could afford to withdraw from the market. Second, the lack of draw-downs due to limited investing activity by GPs had further reduced liquidity pressure on potential sellers. As a consequence, the valuation gap between buyers and sellers narrowed quickly from its largest spread in the first half of 2009.

Overall, our analysis from interviews and published sources allows us to conclude that there was no strong lag or overreaction in the secondaries market response, compared to the coetaneous valuations and trading volumes on stock exchanges. The secondaries market is dominated by expert investors that react quickly to a changing market environment. While opportunistic investors appeared starting in late 2008 and presumably led to a permanent widening and diversification of the investor base, the specialists seem to have dominated the price discovery process in the market. Also, even opportunistic buyers in the secondaries market are professionals and hence not a likely source of delayed market responses.

## 4. Expert Assessment and Outlook

We turn to a discussion of how the crisis experience triggered changes that are likely to have lasting influence on the structure of the secondaries market, and to a plausible outlook for this market in 2011 and beyond.

The market observers we interviewed saw a substantial and sustained buyer interest, and expected that the crisis had helped to generate a lasting diversification in the buyer population**.** While dedicated secondaries and fund of funds have dominated the buyer side of the secondaries market in the past decade, by comprising 70% of the cumulative transaction volume in secondaries (as of 2010), the crisis had led to the entry of a new and diversified group of buyers that are likely to stay. Approximately $33bn were raised in 2009 by the largest players in the market (except Coller Capital's $4.8bn and Greenpark Capital's $0.7bn funds raised in 2007). The investment capacity is expected to increase due to new fundraising activities and the continued presence of opportunistic buyers who first entered the secondaries market during the core phase of the crisis, from the end of 2008 to late 2009. These include numerous pension funds, insurance companies, family offices, endowments, foundations, primary PE investors, GPs and sovereign wealth funds. Such non-traditional investors took advantage of the large supply of assets and market sources expect them to be active in the secondary market, also given the low fundraising/investing activity in the primary market. For example, AXA Private Equity strongly increased its exposure after completing $2.6bn in secondary deals in 2010 and CIC (the Chinese sovereign wealth fund) invested for the first time in this asset class by committing to a $1.5bn fund focused on secondary market investments. The entry of a wider range of buyers may lead to further increases in deal volumes and underlines the increased maturity of the market, which was originally dominated by a few large players.

In terms of seller population in the secondaries market, many market participants we spoke to expected that banks would remain very active sellers in the near future. The origin of this trend is the changing regulatory environment: the emerging Basel III capital adequacy framework will make private equity investment prohibitively expensive for banks. But given the long announced transition period until 2018, banks have time to adjust, so that the impact on the sell side could last for several years. In addition, the Volcker rule in the United States induces banks to sell private equity assets, a process that got quickly under way in the second half of 2010 and is expected to continue in 2011. In Europe, insurance companies are also expected to emerge as active sellers, triggered by the Solvency II Directive of the European Commission that makes private equity investment much more expensive for insurers. Some, such as AXA, have made public statements to this effect in the second half of 2010,

As far as deal size is concerned, our interview partners did not expect individual deal values to become any larger than those seen in the BofA-AXA transaction in April 2010. The diversification in the type of transactions is also expected to increase. For example, a type of transactions that some observers expect to become more important are sales by private equity funds who are selling old portfolios, in order to close out old funds. Similarly, family offices are expected to sell less performing funds as they re-evaluate their portfolio and their GP relationships. By contrast, market observers believe that despite the public announcements of prospective sales from endowments such as Harvard and Stanford, not much deal volume will emerge from university endowments.

Deal volumes are expected to continue to increase and stabilize at a high level. The supply of assets will increase, due to improved pricing for sellers and changes in the regulations that will force US and European banks to reduce their exposure to private equity. On the demand side, traditional secondary investors might articulate a sustained strong appetite following the large amount of funds raised and a poor 2009. In addition, many opportunistic investors entered the market during the crisis, hoping to gain exposure to the asset class at attractive valuations. Some observers expect deal volumes or number of deals to double or even triple compared to those observed in 2009. Another factor that might increase deal flow is a return to higher levels in capital calls they remained at very levels in 2009 and into 2010. As capital calls are picking up in the context of an improving economic environment, new pressure on sellers to fund such draw-downs will emerge, and LPs that do not want to put up the cash will increase the seller population.

Any speculation on the future outlook of the market must come with an important caveat. As the financial crisis demonstrated, economic stability is the key variable that will drive buyer and seller expectations. Any change there is likely to quickly affect the secondaries market as well. Looking at its relative short history but strong growth, and in particular the resilience that the it showed with its remarkably quick recovery in the second half of 2009, the secondaries market appears to have a solid potential both during the downturns and upturns of the private equity cycle. While at present it still represents only a small fraction of the $2-2.5trillion managed by private equity funds worldwide (as of early 2009), there is plenty of room for the secondaries market to grow in scale and scope.

## 5. Conclusion

This papers offers an account of the performance of the secondaries market during the core period of the financial crisis of 2008/2009. We show that the crisis led to its near-collapse in the first half of 2009, but also to a remarkably fast recovery that had no discernible lag relative to that of stock markets. We identify the widening valuation gap as the key metric of market illiquidity during the core distress period, and suggest behavioral and accounting-based explanations for this particular form of market behavior during the crisis. Overall, we conclude that the secondaries market proved to be resilient. The fund flows and flows of capital call during the crisis lend some credibility to regard the emerging liquidity for private equity as an efficient development.

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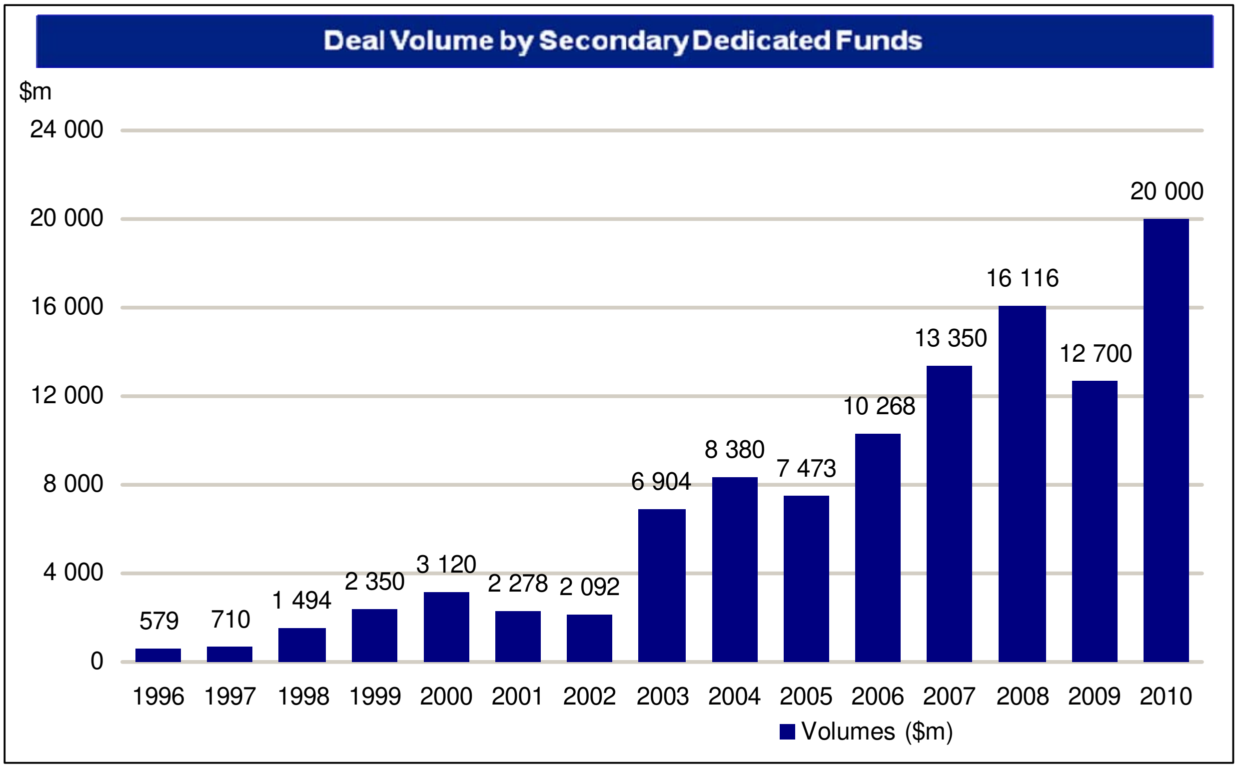


**Figure 1 – Secondary market deal volumes in $m (1996-2010)**

The numbers represent annual aggregate deal volumes in the private equity secondaries market, per year in Milion US$ volumes from 1996 to 2008. One-time ("opportunistic") secondaries investors are excluded.

*Source: Dow Jones Guide to Secondary Markets 2009; Lexington Partners, Private Equity Analyst; Coller Institute of Private Equity.*

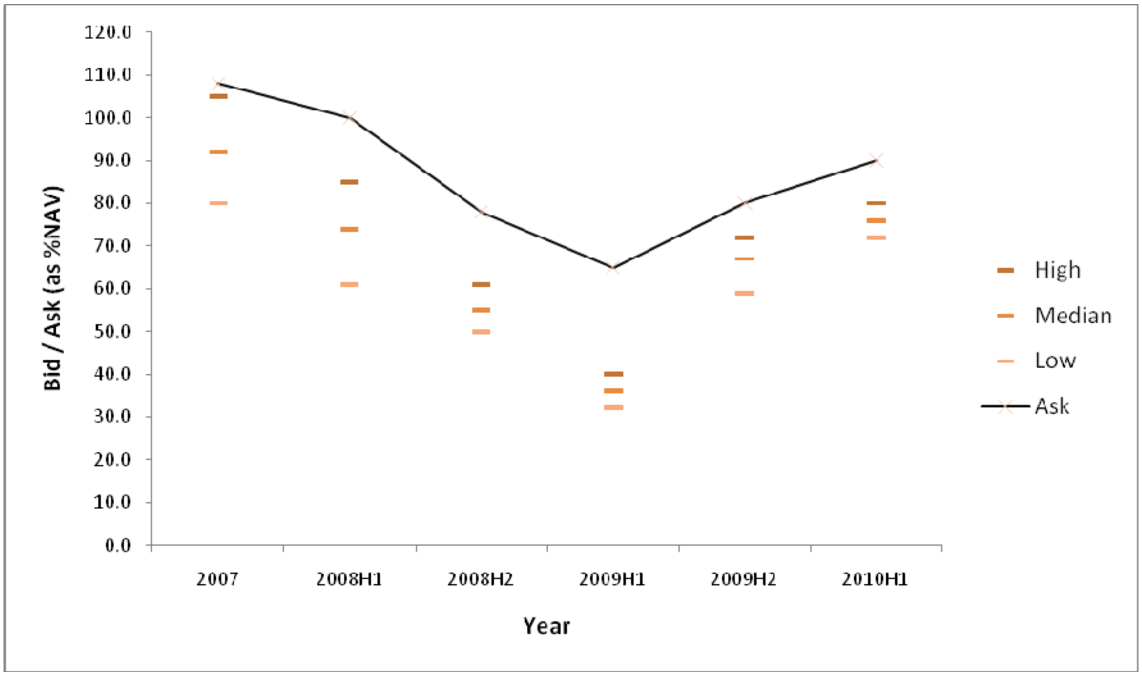


**Figure 2 – Bid (High, Median, Low)/Ask Spreads as a % NAV during 2007-2009**

*Sources: Cogent Partners, Secondary pricing trends & analysis; Pinebridge estimates.*

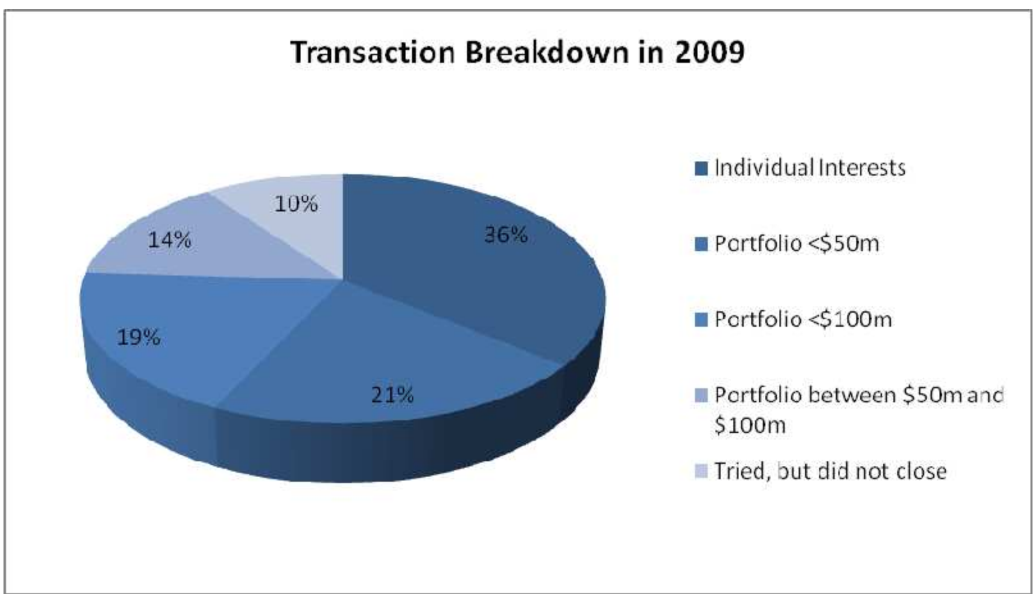


**Figure 3 – Secondary Transactions Breakdown in 2009**

*Source: Probitas Partners*

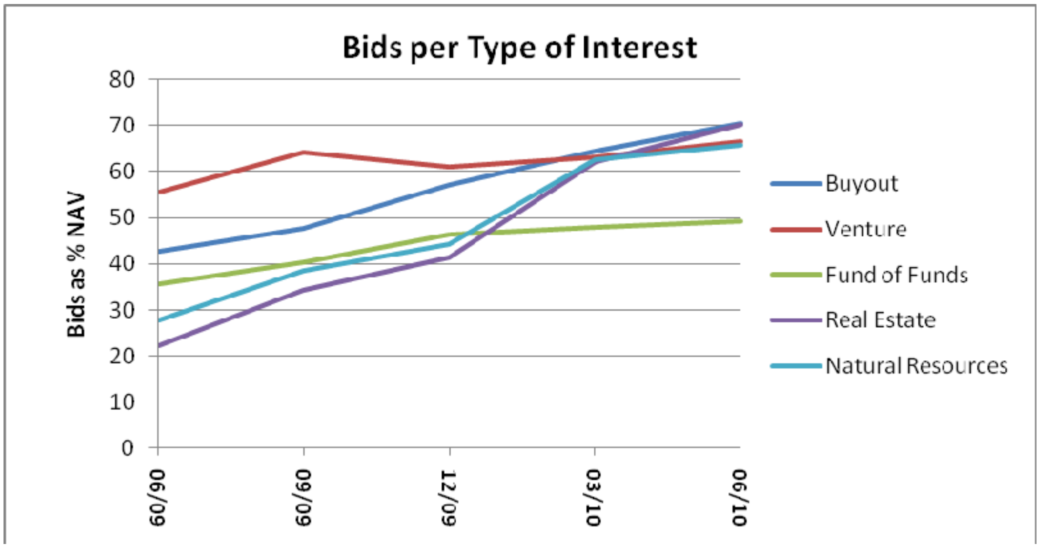


**Figure 4 - Bids Per Type of Interest**

*Sources: Nyppex 2009 Secondary Private Market Review and 2010 Outlook; Nyppex 2Q2010 Secondary Private Market Outlook.*

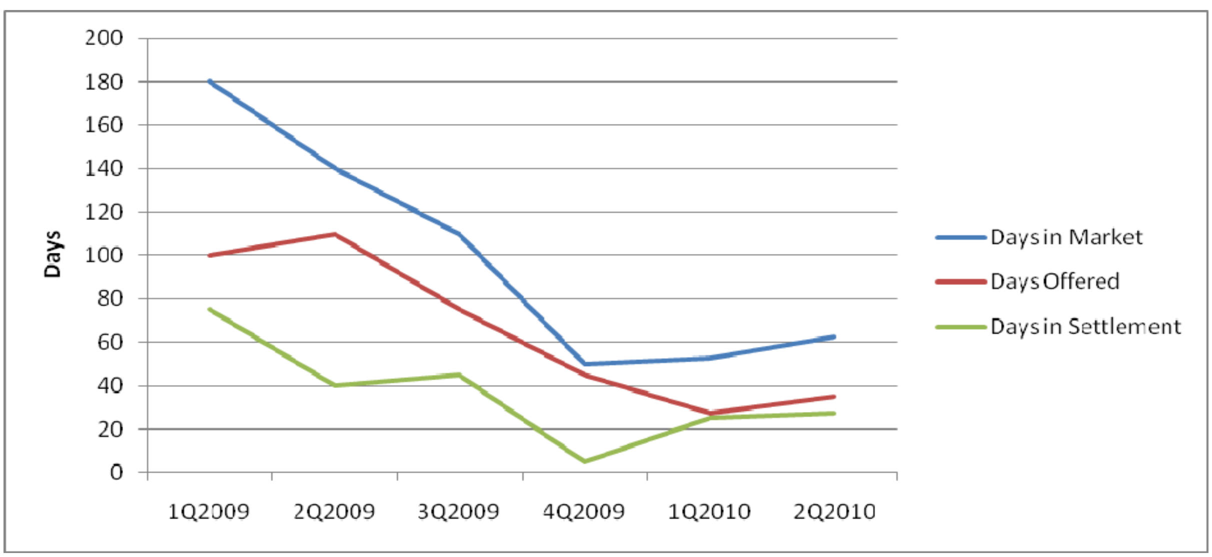


**Figure 5 - Evolution of Time Lag between Secondaries Deal Offer and Conclusion**

*Sources: Nyppex 2009 Secondary Private Market Review and 2010 Outlook; Nyppex 2Q2010 Secondary Private Market Outlook.*