

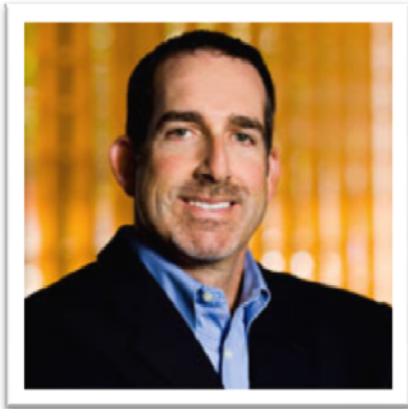


Silicon Valley Bank

Healthcare Venture: State of the Industry Update

**Jon Norris, Managing Director
Acceleration 2013**

Jon Norris: Managing Director, SVB



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Manage West Coast Life Science VC

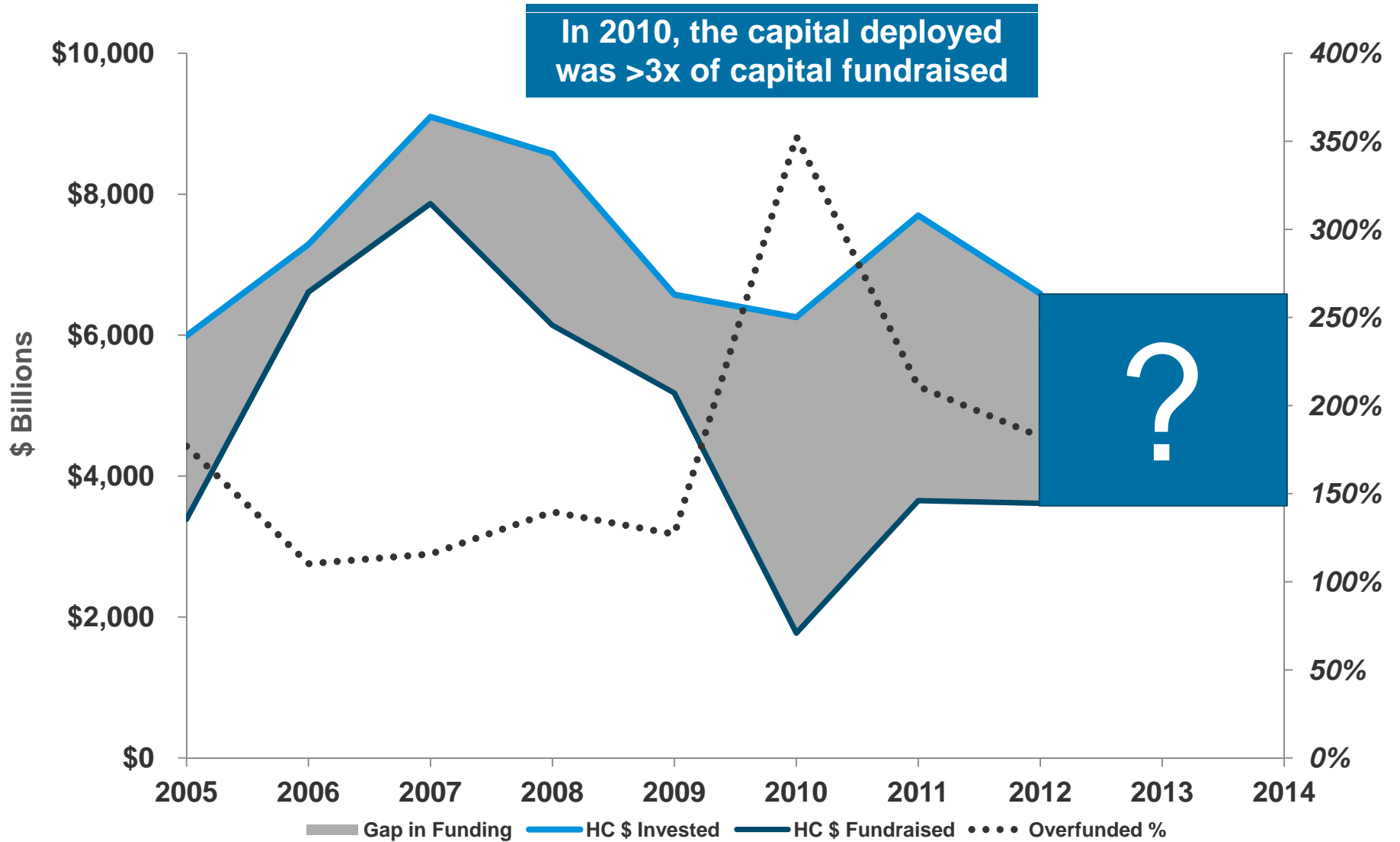
- Fund of Funds (Investment as LP)
- Direct Equity (Co-Investments and Rights to Invest)
- Commercial Bank (Venture/Mezzanine Debt, Asset-based Debt, New Fundings)
- Equity Financing Strategy for Early Stage and Venture-Backed Companies
- Industry Thought Leadership

Recent Publications

- Strong Momentum in Healthcare (2013)
- First Mover Advantage (2012)
- Continued Rebound (2012)
- Trends in M&A (2011)
- Bringing Home the Bacon (2010)



HC Funding: Dollars Invested



Year refers to Vintage Year of Fund.
 Source: PWC; Thompson Reuters; SVB Proprietary data
 Refer to Appendix A for additional data

HC Funding: Dollars Fundraised

The Declining Numbers:

	2005 - 2008	2009 - 2012	Change
# HC Funds Raised	99	65	-34%
Dollars Raised (000)	\$25,900	\$14,679	-43%

In the next cycle (2013-2016), I predict HC Funds will again decrease by 30-40%



Year refers to Vintage Year of Fund.
Source: PWC; Thompson Reuters; SVB Proprietary data
Refer to Appendix A for additional data

Looming HC Funding Gap

5 Year Prediction:

- Fundraising dollars will remain stable at \$3-3.5B
- Investment dollars have to decline – likely to \$5-5.5B

Problem? Current HC Company Bottleneck

The Bad:

Capital Waiting to Exit 2003 – 2011
(Companies still private)

\$13B venture money in **746** biotech companies

\$13B venture money in **689** device companies



Source: Venture Source; SVB Proprietary data

Problem? Current HC Company Bottleneck

The Ugly:

Capital Waiting to Exit Post Bubble, 2000 – 2002
(Companies still private)

\$7B venture money in **111** biotech companies

\$5B venture money in **96** device companies



Source: Venture Source; SVB Proprietary data

Problem? Current HC Company Bottleneck

The Problem:

Based on fewer firms and \$s available, older companies represent the most significant risk of:

- ▶ Broken investor syndicates
- ▶ Non support by insiders
- ▶ Recap
- ▶ Shut down

This bottleneck also makes it harder for acquirers to decide which companies to partner with/acquire.

HC Company Bottleneck

The Opportunity:

- (1) Even if 50% are “walking dead” and unable to raise additional equity, that leaves 800 potential investment opportunities, likely at attractive valuations, for investors with fresh capital to deploy.
- (2) Good sources of capital exist – just less of them.
25 HC firms that historically lead deals have raised \$7.2B in new capital since 2011. Avg. Healthcare Fund Allocation: \$280M
- (3) Device still gets attention: Firms Invested in at least **2 new medical device deals since 2012: 36 VCs, 6 Corporate, 5 PE and 2 Institutional Investors.**



Year refers to Vintage Year of Fund.
Source: PWC; Thompson Reuters; Pitchbook; SVB Proprietary data

Right-Sizing of the HC Company Landscape

A small group of VCs with capital to deploy will pick through a large population of older companies, likely at very attractive valuations

A significant portion of these older companies will be unable to find outside financing and will look to merge/sell/shut down

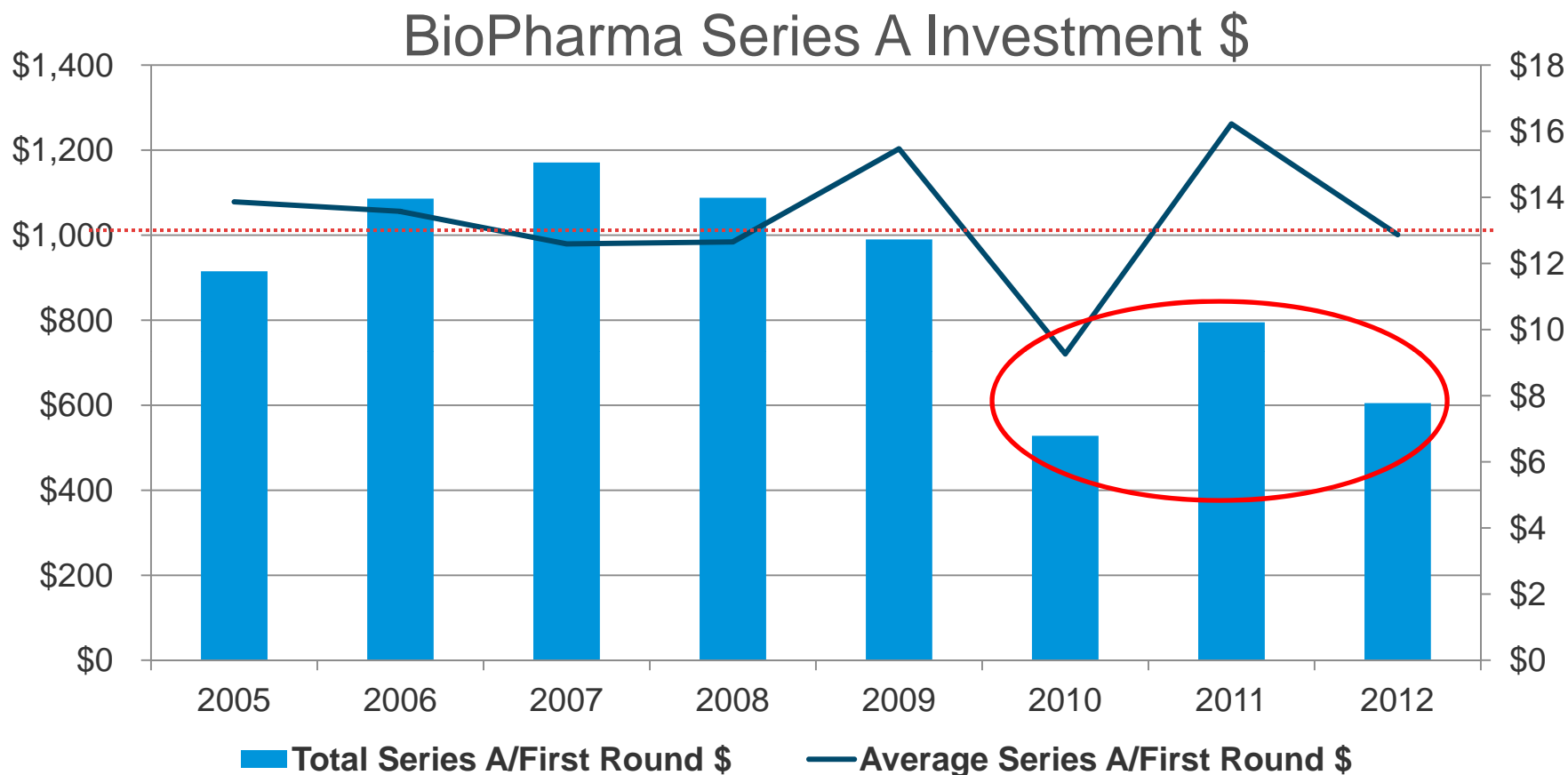
Who is Actively Deploying New Capital Now?

Dollars Deployed as a new investor into a financing round since 1/1/12

Top 10 Biotech Investors		Top 10 Device Investors	
<u>Investor</u>	<u># Deals</u>	<u>Investor</u>	<u># Deals</u>
Third Rock Ventures	11	NEA	8
OrbiMed Advisors	10	Versant	7
S.R. One, Limited	9	Boston Scientific	4
Canaan Partners	9	Abingworth	3
Novo A/S	8	Delphi	3
MPM Capital	8	Hatteras	3
New Enterprise Associates	8	Longitude	3
5AM Ventures	7	Orbimed	3
Astellas, Aisling Capital, Alta, Novartis, Pfizer, Osage	6	Vivo	3
		Tekla Capital	3



Company Creation: Total Investment and Series A Round Size by Year

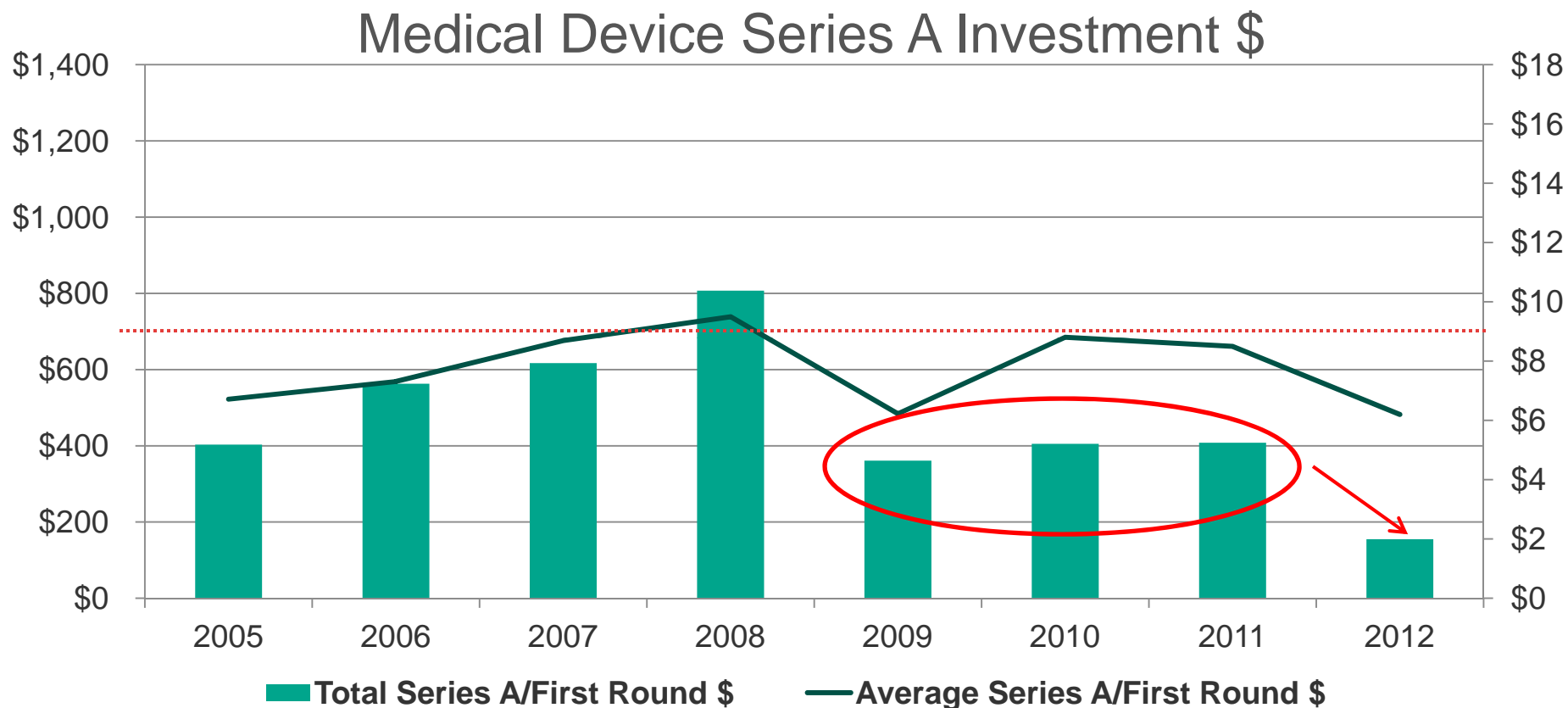


While the average Series A round size held steady, there is a new cycle of reduced investment into Biotech Series A, starting in 2010.



*Includes Series A companies raising at least \$2,000,000 in equity
SVB Proprietary Data for Series A Dollars and Number of Companies using VentureSource

Company Creation: Total Investment and Series A Round Size by Year



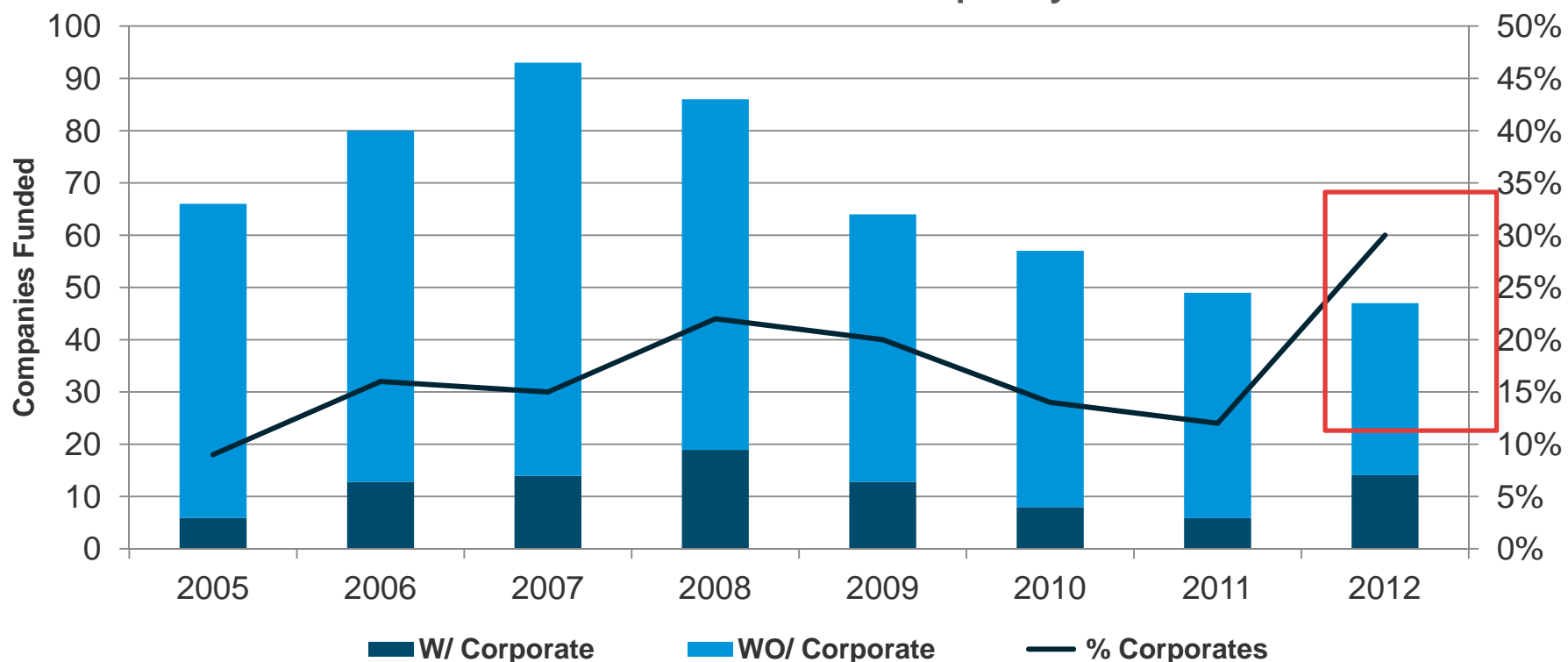
Substantial decrease in funds invested into Series A Medical Device Companies since 2008, and another free fall in 2012.



*Includes Series A companies raising at least \$2,000,000 in equity
SVB Proprietary Data for Series A Dollars and Number of Companies using VentureSource

Company Creation: Corporate Investors Plugging the Gap? Yes!!!

BioPharma Series A Company Creation



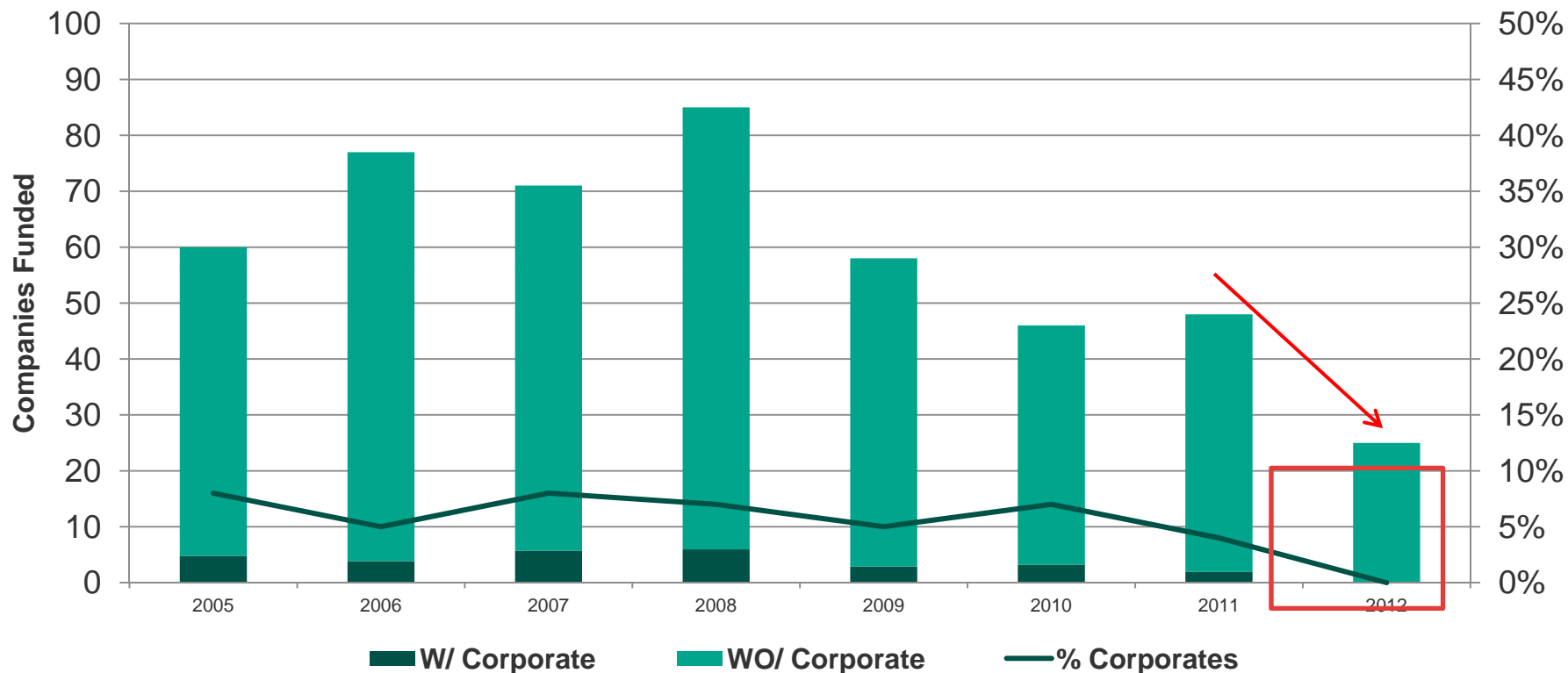
Corporate Venture helps prop up biotech innovation, with almost 1 in 3 companies raising Series A including a Corporate Venture Investor in 2012



*Includes Series A companies raising at least \$2,000,000 in equity
SVB Proprietary Data for Series A Dollars and Number of Companies using VentureSource
**2013 data sourced from Pitchbook

Company Creation: Corporate Investors Plugging the Gap? No!!!!

Medical Device Series A Company Creation

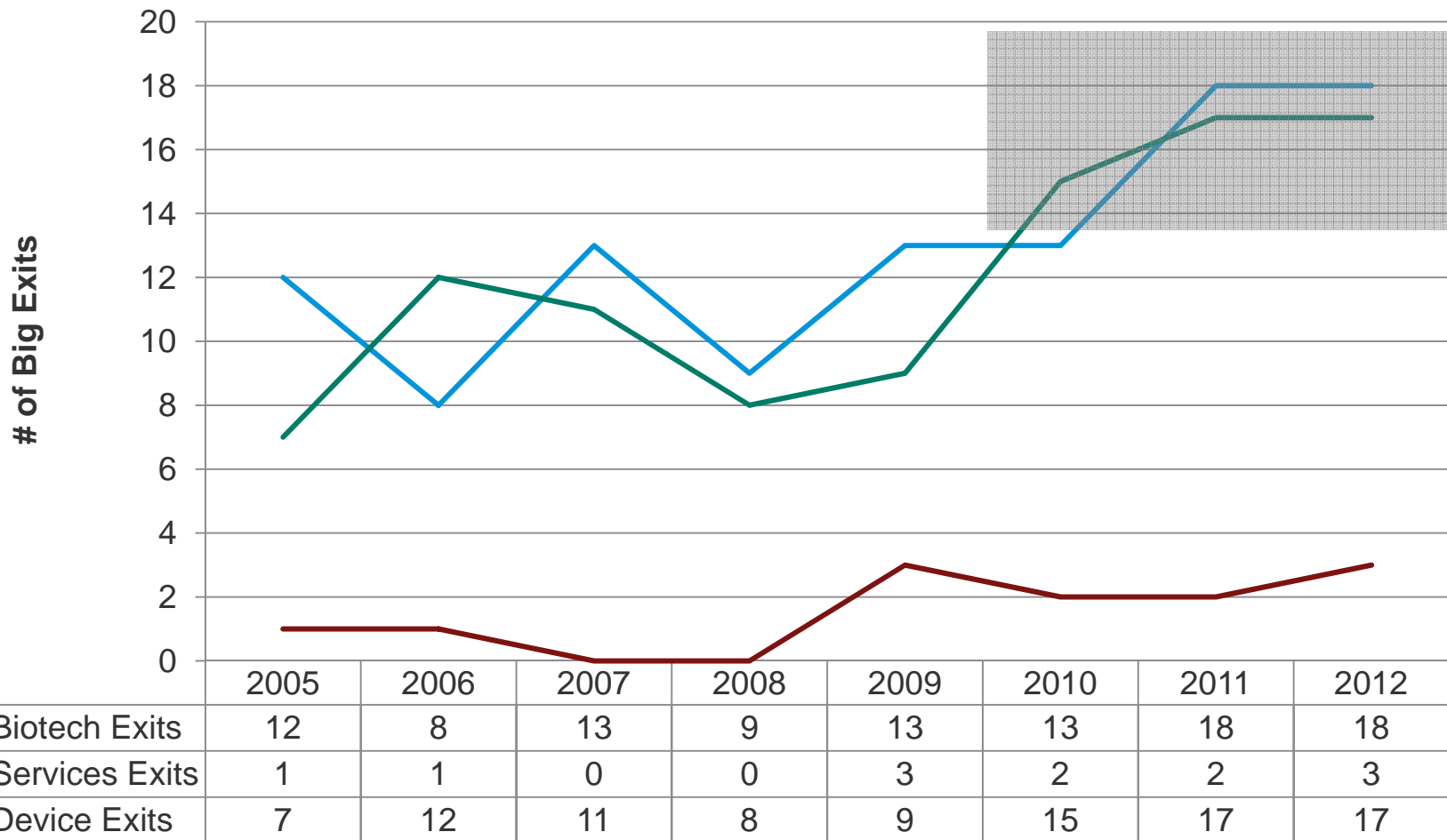


Corporate venture helps prop up biotech innovation, but without that support device company creation struggles, especially in 2012



*Includes Series A companies raising at least \$2,000,000 in equity
SVB Proprietary Data for Series A Dollars and Number of Companies using VentureSource
**2013 data sourced from Pitchbook

M&A Overview: Private HC Big Exits 2005-2012

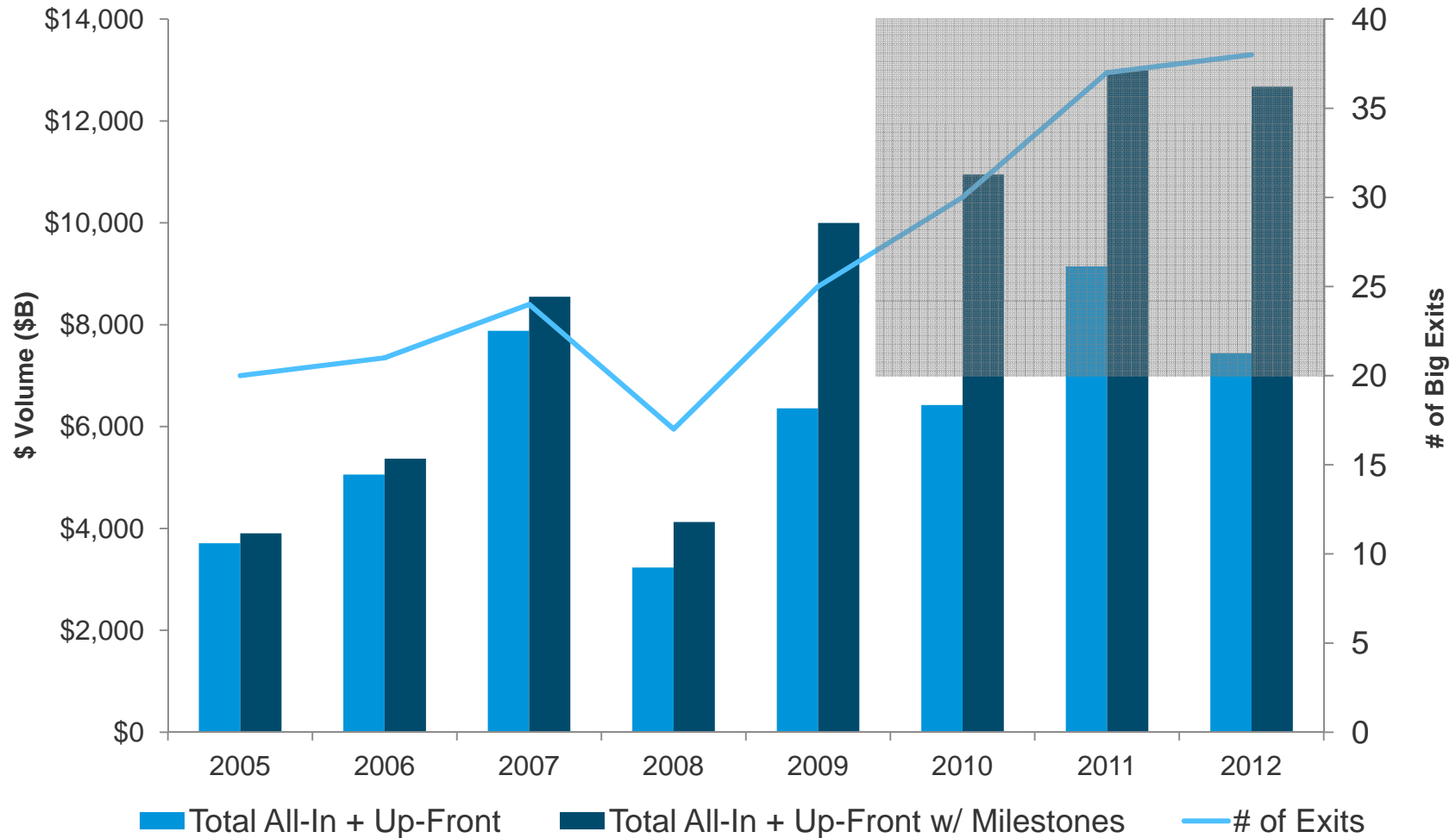


2013 YTD Estimates: BioPharma 12; Device 11; Services 2



Big Exits: 2005-Present. Private Biotech M&A Up Front >\$75M, Med Device/Services M&A Up Front>\$50M. "Up-Front": Up-Front defined as payments in a structured deal not including milestones. "Up-Front w/ Milestones": Up-Front defined as payments in a structured deal including milestones. "All-In": Deals where the total value is paid at the close of the transaction. Sources: Investment Bank Reports, Venture Source, Press Releases & discussions with Life Science professionals.

M&A Overview: Big Exit Deal Values 2005-2012



Big Exits: 2005-Present. Private Biotech M&A Up Front >\$75M, Med Device/Services M&A Up Front >\$50M. "Up-Front": Up-Front defined as payments in a structured deal not including milestones. "Up-Front w/ Milestones": Up-Front defined as payments in a structured deal including milestones. "All-In": Deals where the total value is paid at the close of the transaction. Sources: Investment Bank Reports, Venture Source, Press Releases & discussions with Life Science professionals.

M&A Overview: Big Returns to Investors/LPs

Note:

Assume 70% venture ownership in these Big Exits (not including milestones). From 2010-2012, over **\$16B** in cash has returned to venture investors!

What can we measure with this data?

Analyses by Sector, Indication and/or Stage:

▶ Number of Exits

▶ Structured v All In Deals

▶ Up Front/All In Deal Value

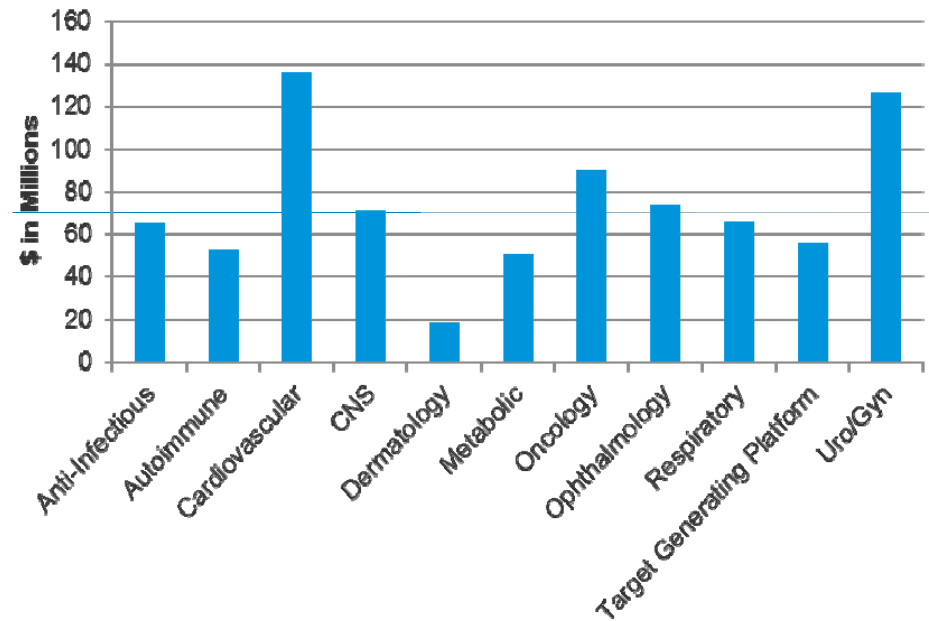
▶ Multiple on Invested Capital

▶ Time to Exit

▶ Acquirer activity

▶ Dollars Invested

Biotech Big Exits: Average Dollars In 2005-2012

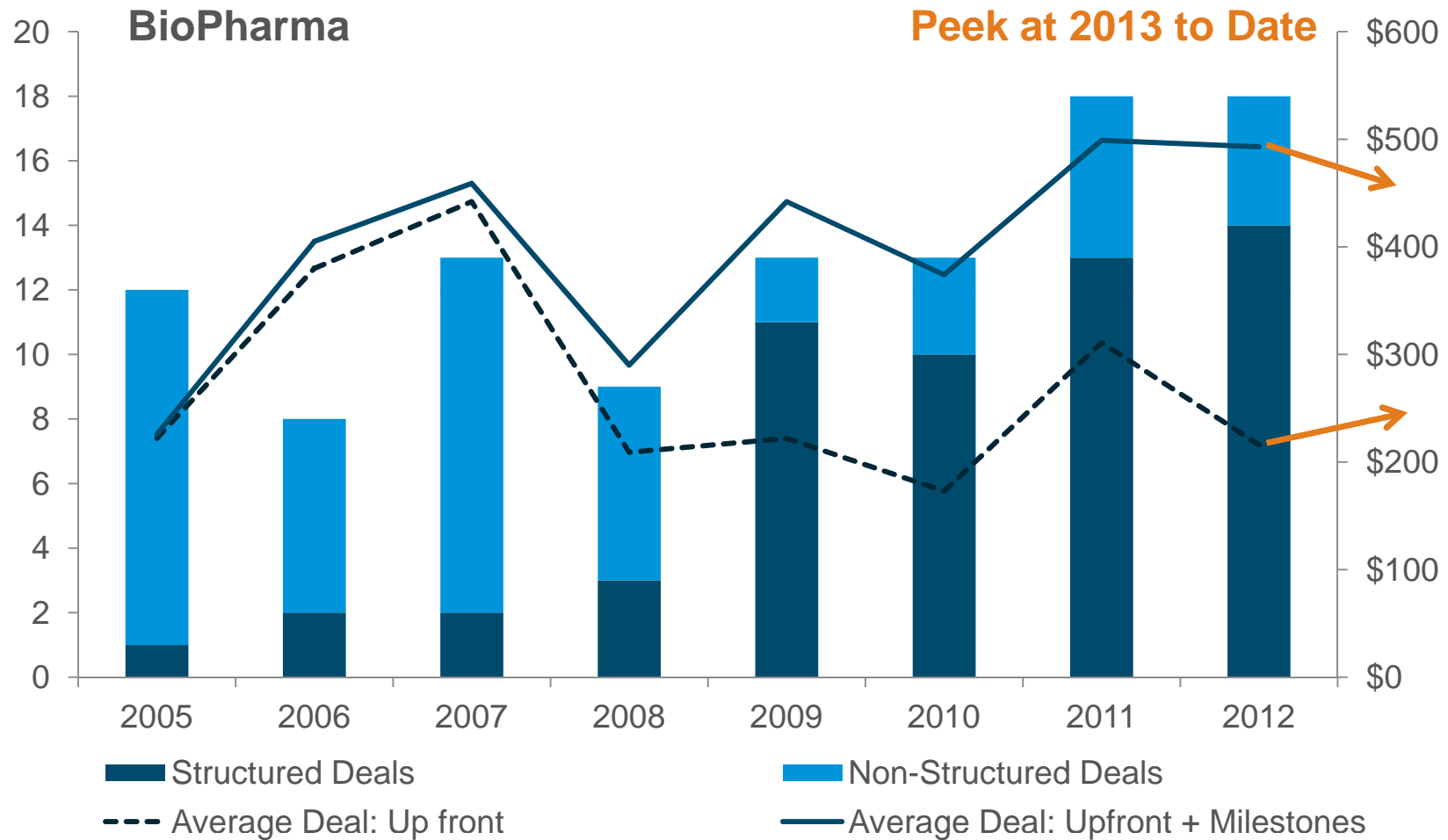


Robust data set of exits since 2005 provides in-depth analysis and the ability to monitor and predict cyclical activity



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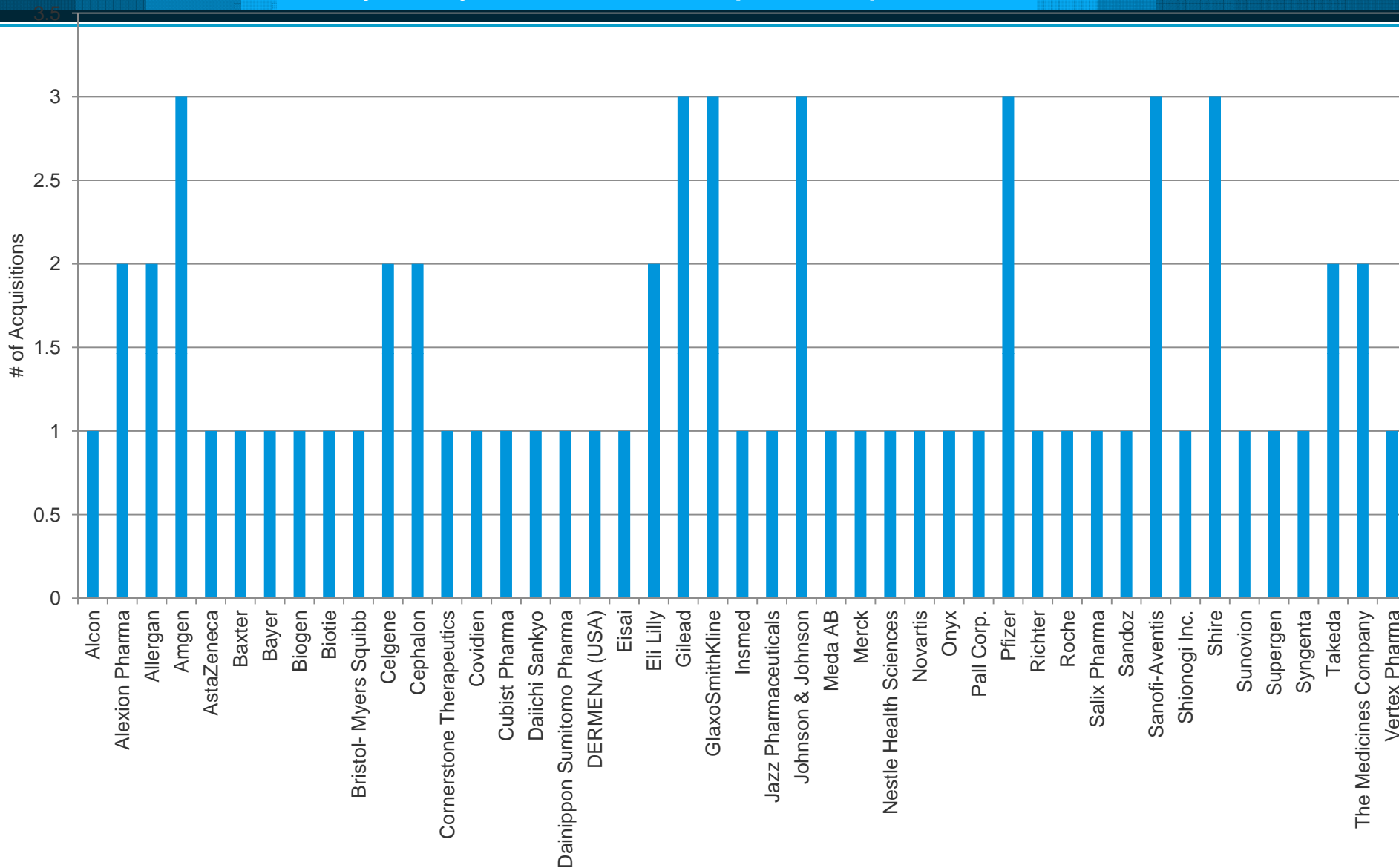
Biotech Big Exit Deal Value and Structure 2005-2012



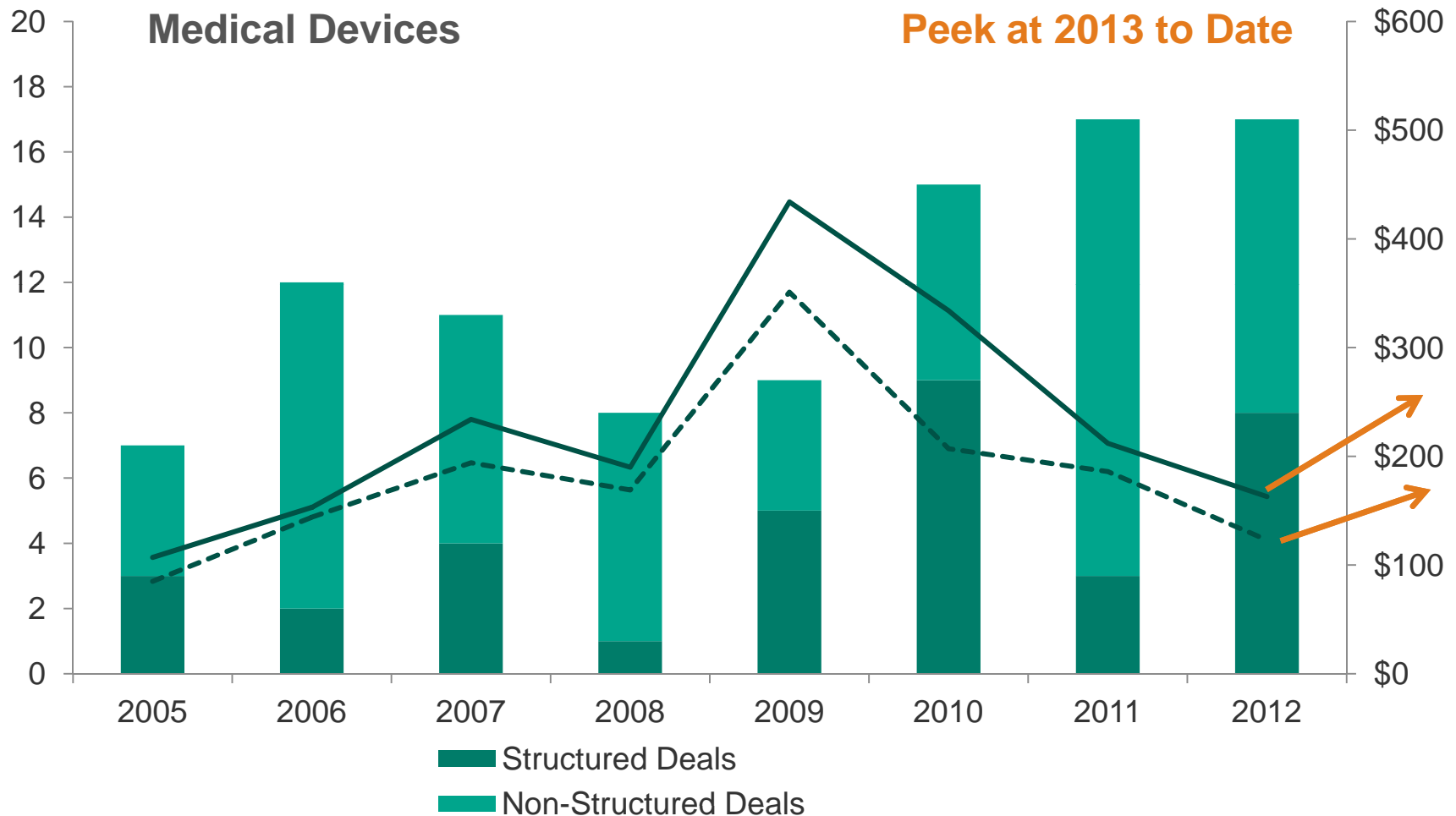
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Biotech Big Exit Acquirers 2009-2012

Many Players with Multiple Acquisitions



Device Big Exit Deal Value and Structure 2005-2012



Big Exits: 2005-Present. Private Biotech M&A Up Front >\$75M, Med Device/Services M&A Up Front>\$50M. "Up-Front": Up-Front defined as payments in a structured deal not including milestones. "Up-Front w/ Milestones": Up-Front defined as payments in a structured deal including milestones. "All-In": Deals where the total value is paid at the close of the transaction. Sources: Investment Bank Reports, Venture Source, Press Releases & discussions with Life Science professionals. Multiples are calculated based on all-in and up-front amounts and do not include milestones

Device: Acquirer Analysis by Year (2009-2012) Minimum 2 Big Exits Acquisitions

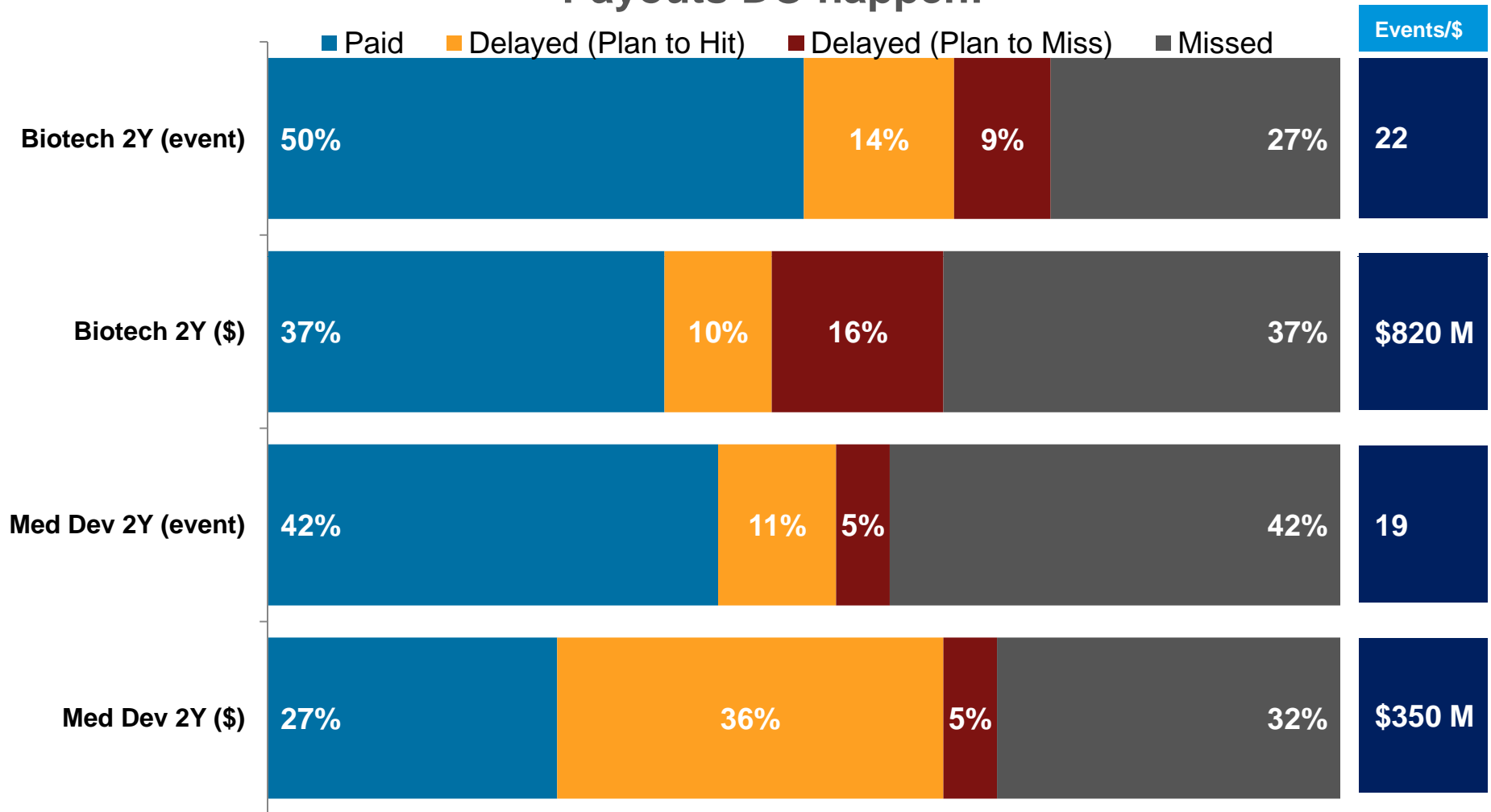
Acquirer	Year	# Exits	Indications	Stage	Avg. Up Front \$	Avg. Total \$
ABBOTT	2009	2	Cardiovascular; Ophthalmology	CE Mark (2)	\$360M	\$405M
MEDTRONIC	2009	3	Cardiovascular (3)	CE Mark (2) US Commercial	\$416M	\$613M
BOSTON	2010	2	Cardiovascular; Respiratory	Non-Approved US Commercial	\$193M	\$415M
BARD	2010	2	Cardiovascular; Vascular	US Commercial (2)	\$145M	\$145M
ROCHE	2010	2	Tools; Diabetes	US Commercial; Non-approved	\$130M	\$150M
BOSTON	2011	2	Cardiovascular; Neuro	CE Mark Non-Approved	\$89M	\$227M
BARD	2011	2	Surgical; Vascular	US Commercial; CE Mark	\$238M	\$288M
MEDTRONIC	2011	3	Surgical; Surgical; Uro/Gyn	US Commercial (3)	\$257M	\$257M
BOSTON	2012	2	Cardiovascular; Imaging/Diag.	US Commercial; Non-Approved	\$70M	\$233M
COVIDIEN	2012	4	Resp; Surgical (2); Vascular	US Commercial (2); CE Mark; Non-Approved	\$215M	\$215M

6 Different Acquirers with at least 2 exits in any given year. These six acquirers are responsible for 46% of all Device Big Exit acquisitions between 2009-2012.



Structured Deal Performance in Venture Exits

46% Achievement on Milestones that Come Due within 2 years
Payouts DO happen!



Source: Data provided courtesy of SRS

Biotech Big Exit Deal Update 2013

BioPharma Update 2013:

12 Big Exits

5 Oncology (2 Ph III, 2 Ph II, 1 Ph I)

3 Anti-Infectives (1 Ph III, 1 Ph II, 1 Ph I)

2 Respiratory (1 Com, 1 Ph III)

1 each of Ophthalmology (Ph III), Uro/Gyn (Ph III)

Averages: \$s Raised: ~\$65M

Time to Exit: ~6 years

Up Front \$245M/ All-In \$450M



Big Exits: 2005-Present. Private Biotech M&A Up Front >\$75M, Med Device/Services M&A Up Front>\$50M. "Up-Front": Up-Front defined as payments in a structured deal not including milestones. "Up-Front w/ Milestones": Up-Front defined as payments in a structured deal including milestones. "All-In": Deals where the total value is paid at the close of the transaction. Sources: Investment Bank Reports, Venture Source, Press Releases & discussions with Life Science professionals. Multiples are calculated based on all-in and up-front amounts and do not include milestones

Device Big Exit Deal Update 2013

Device Update 2013:

11 Big Exits

9 Commercial

(3 Vascular, 3 Diagnostic, Ophthalmology, Imaging, Orthopedics)

2 CE Mark

(2 Cardiovascular)

Averages: Up Front \$221M/ All-In \$259M

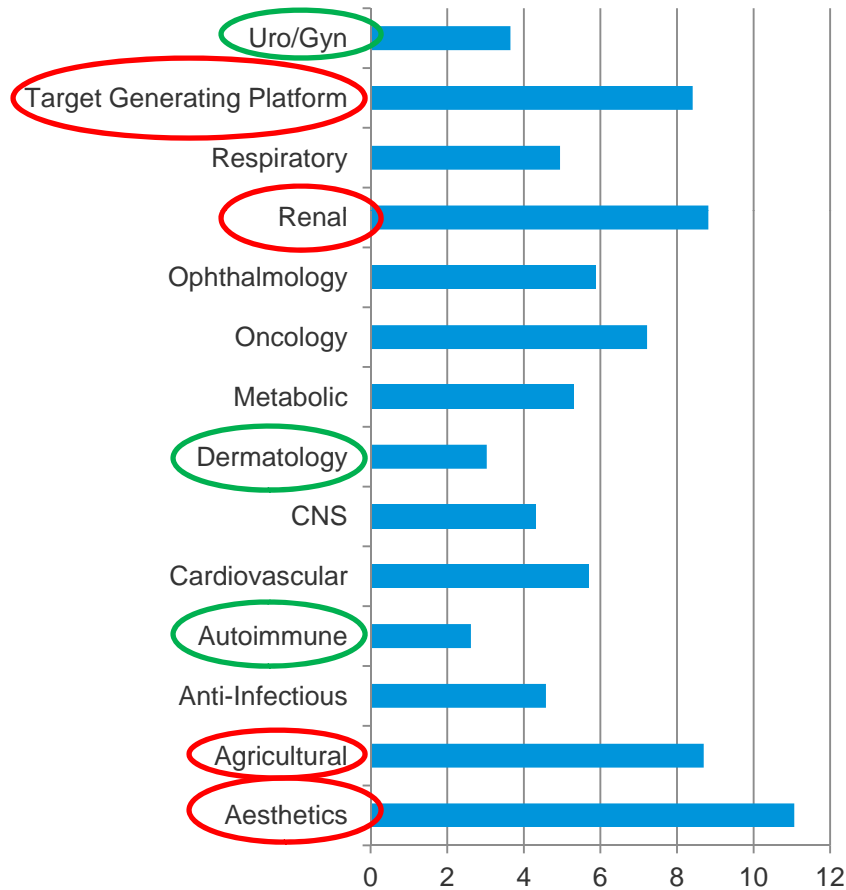
0 Development Stage Companies



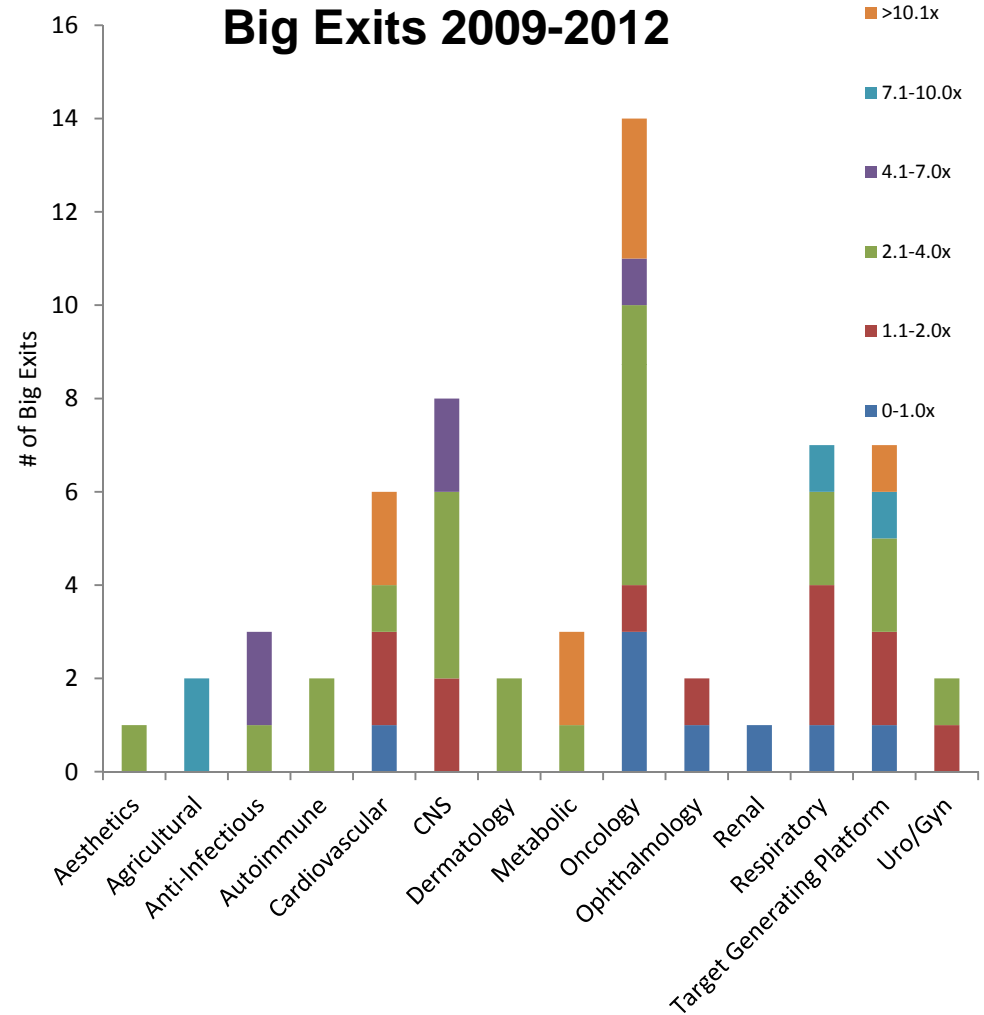
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Biotech Big Exit Indication Analysis (2009-2012)

Avg Years to Exit 2009-2012



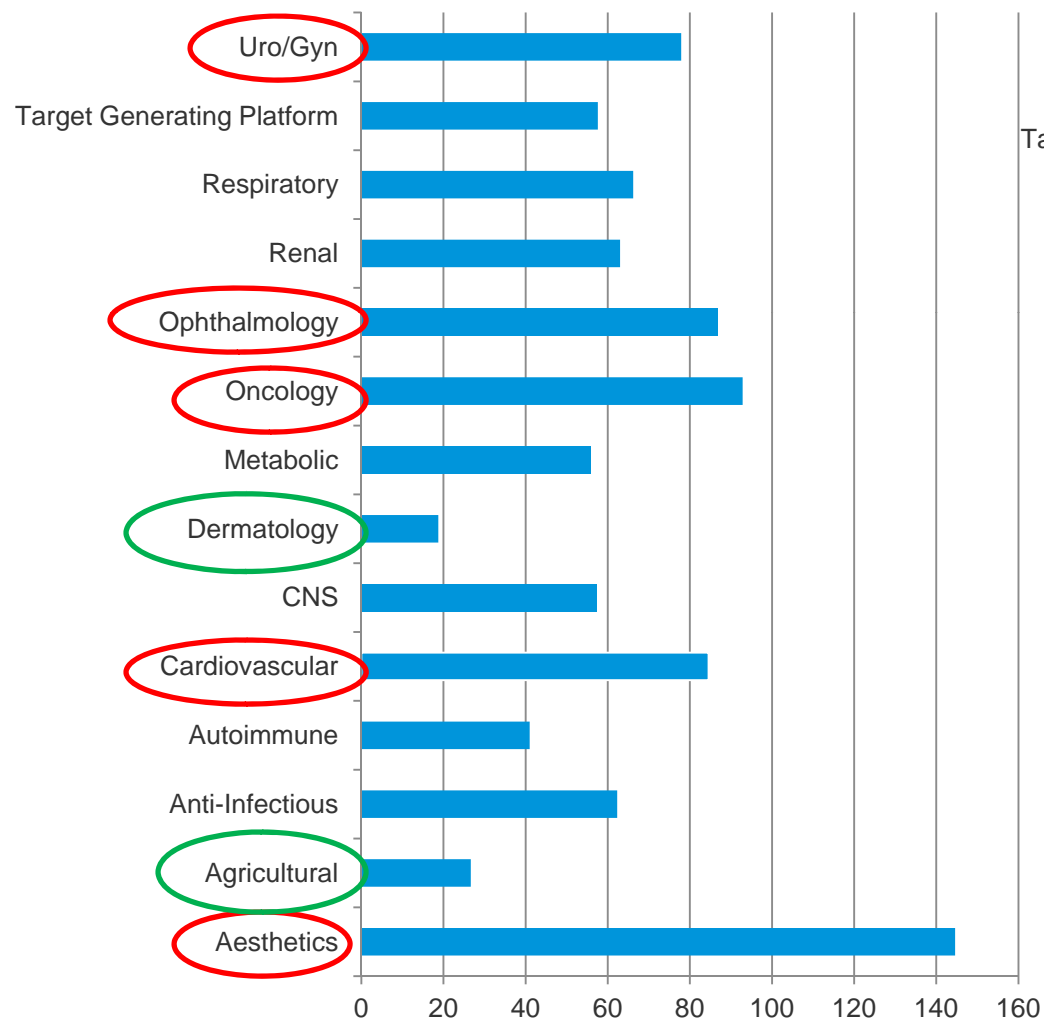
Big Exits 2009-2012



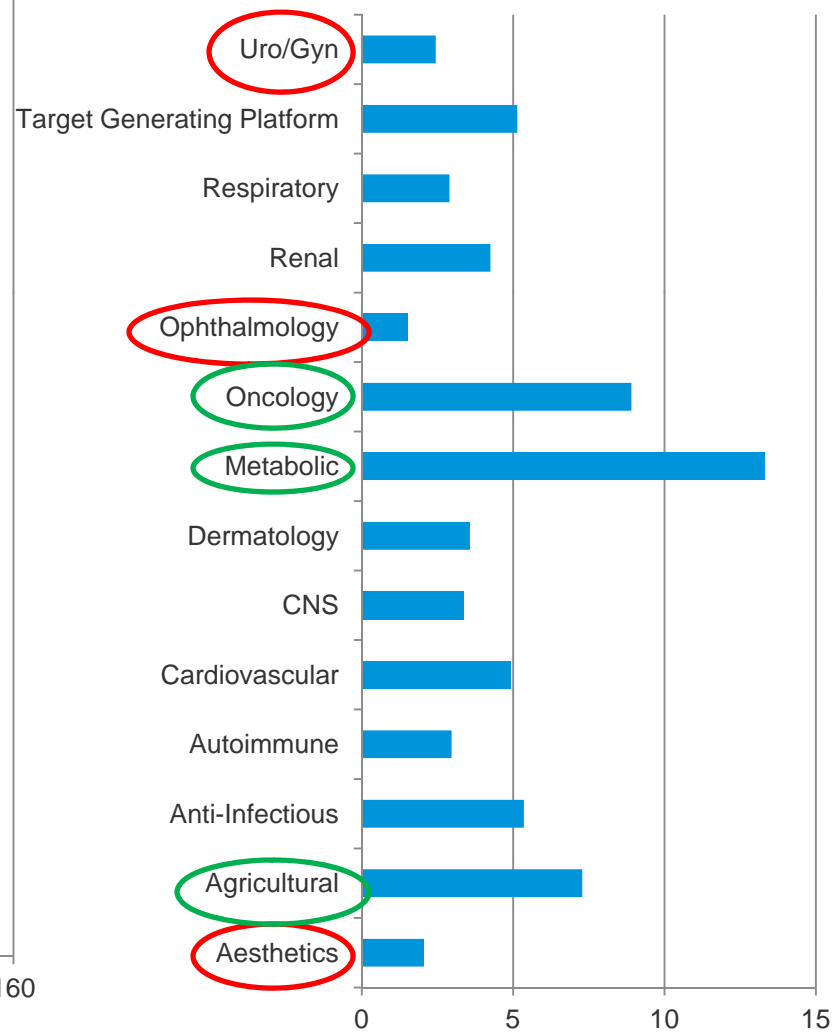
SVB Proprietary Data: Private Venture Backed Big Exits. Multiples calculated on up-front deal values.

Biotech Big Exit Indication Analysis (2009-2012)

Average Dollars In 2009-2012



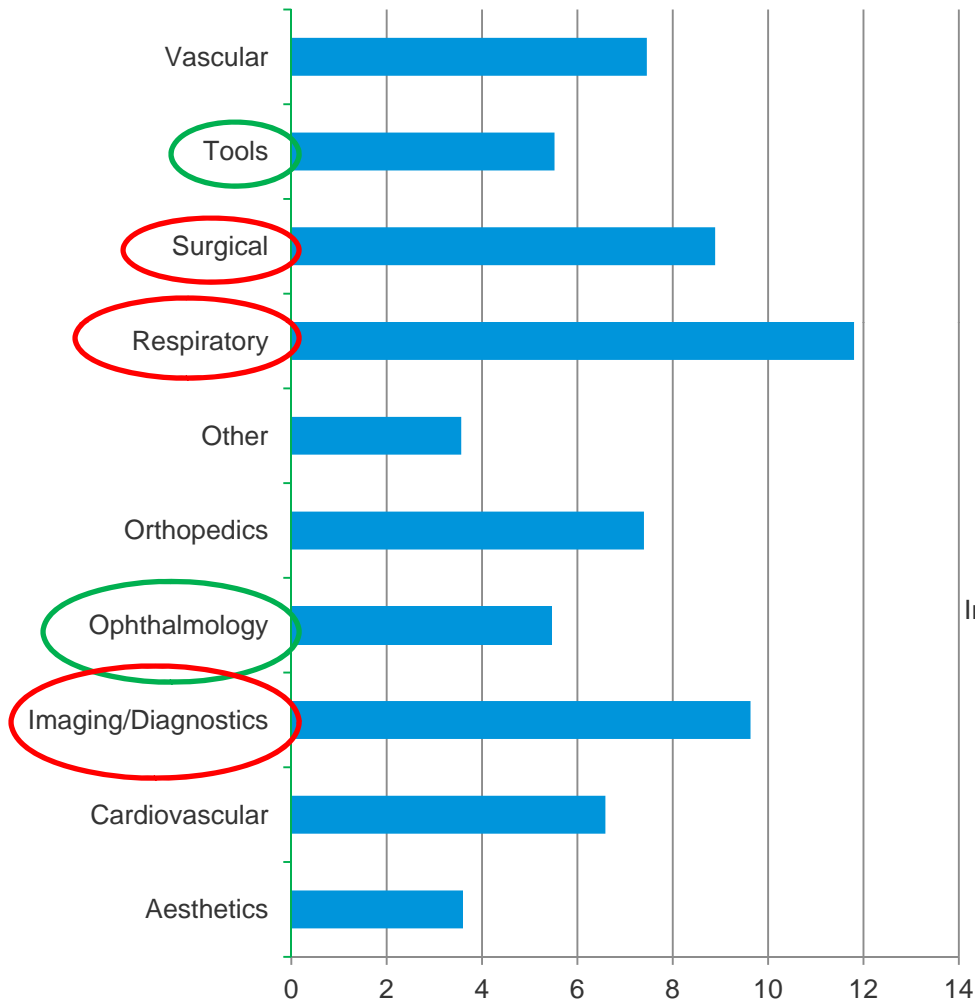
Average Up Front Multiple 2009-2012



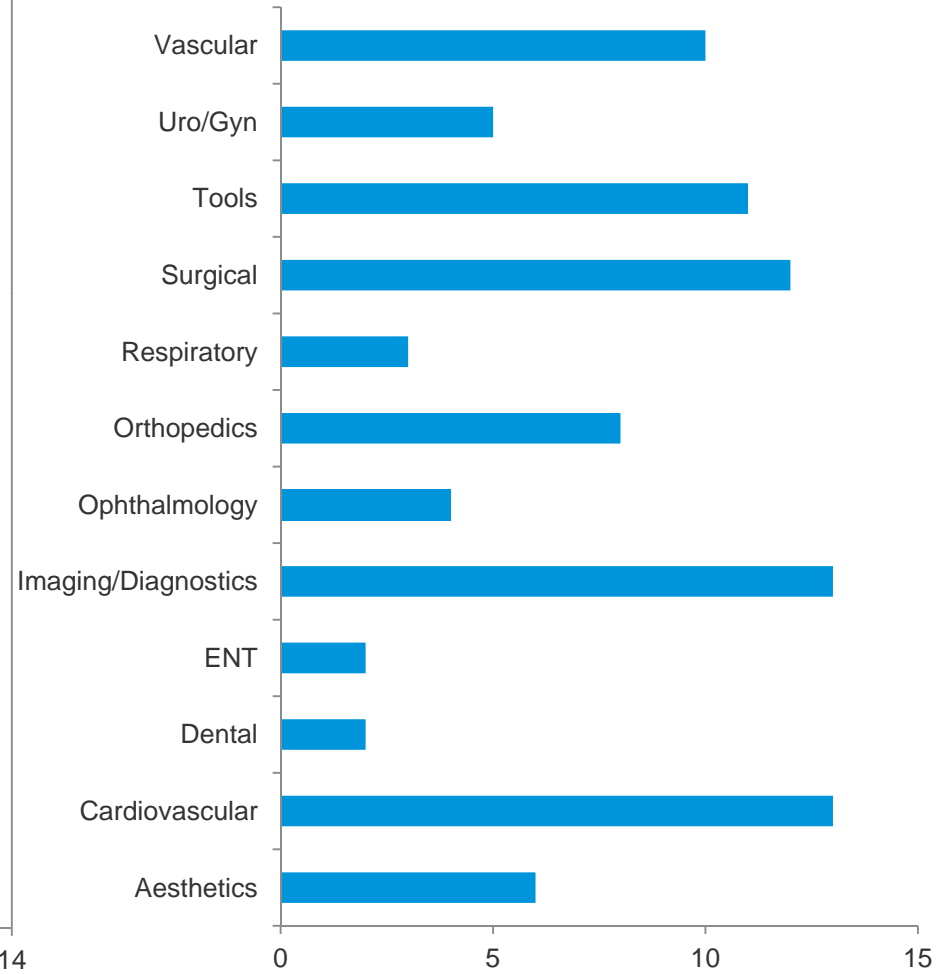
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Device Indication Analysis (2009-2012)

Average Years to Exit 2009-2012



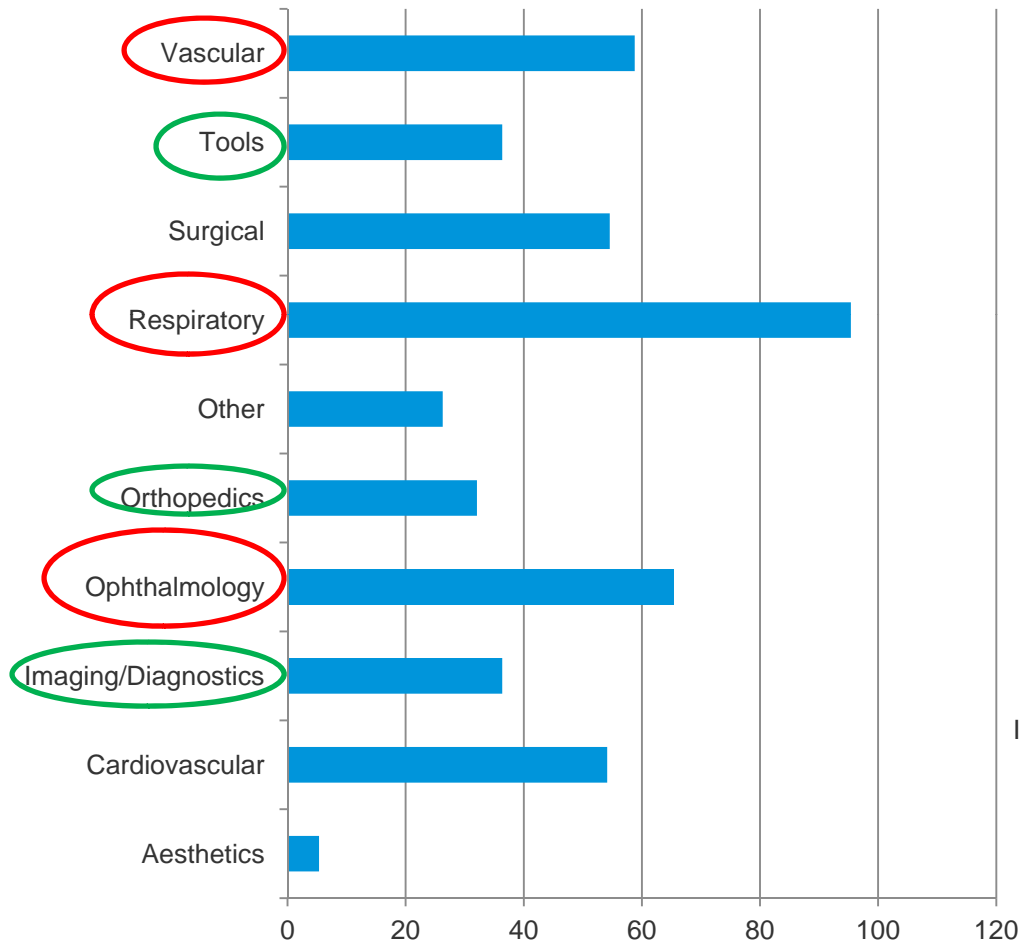
Big Exits 2009-2012



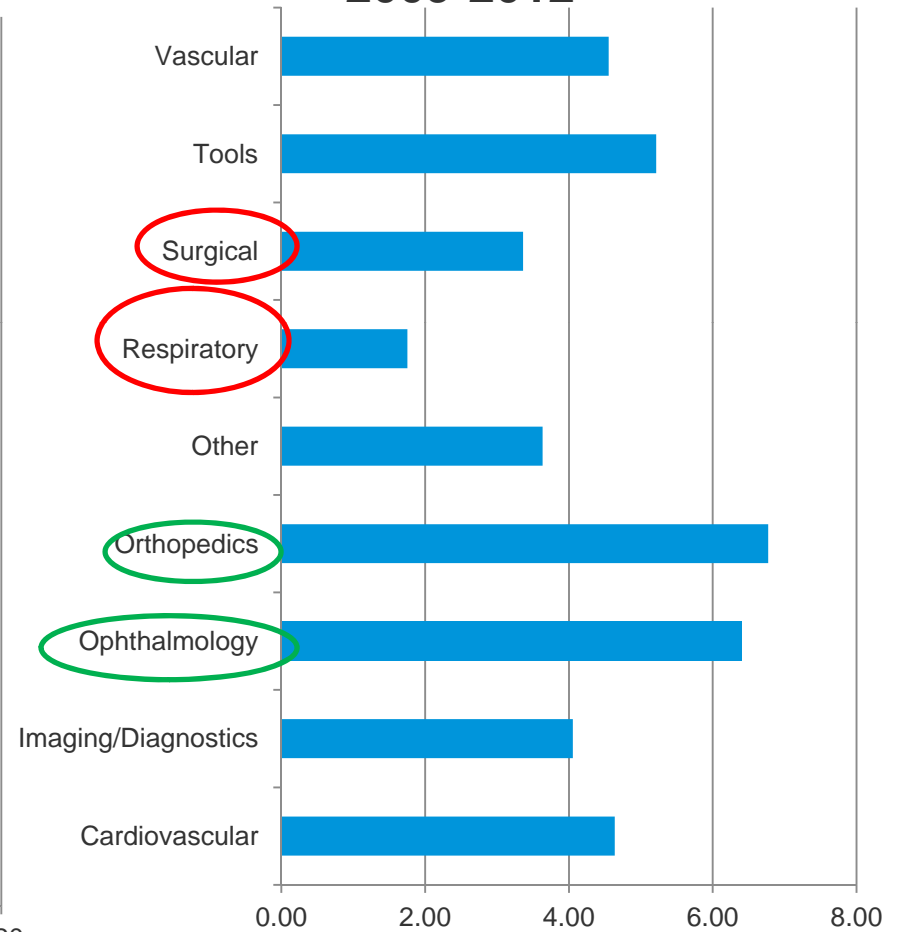
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Device Indication Analysis (2009-2012)

Average Dollars In 2009-2012

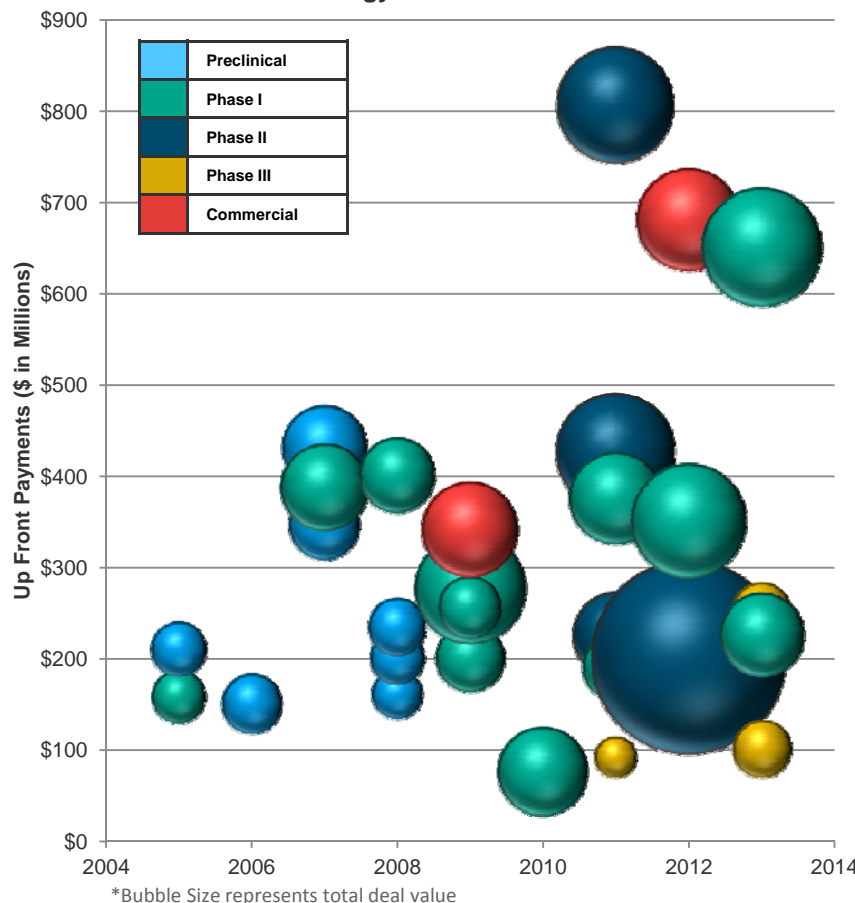


Average Up-Front Multiple 2009-2012

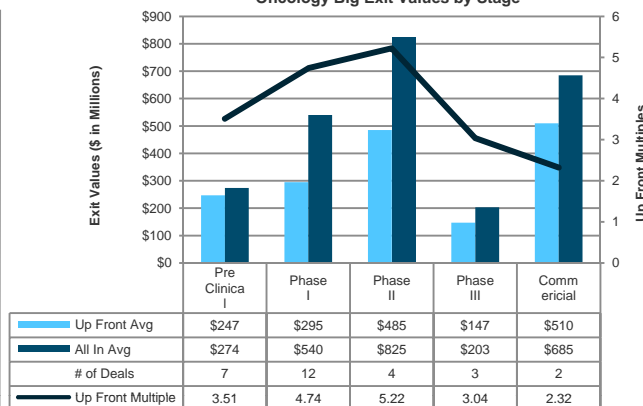


Oncology Tear Sheet: Private Big Exits from 2005 – 2013 (to date)

Oncology Exit Amount

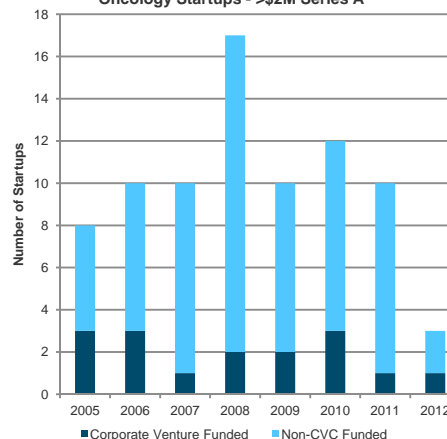


Oncology Big Exit Values by Stage



Oncology Big Exit Investors	# of Big Exits
AltaPartners	5
NOVARTIS	4
OrbiMed	4
PROQUEST INVESTMENTS	4
Abingworth	3
ATLAS VENTURE	3
iw INTERVEST PARTNERS	3

Oncology Startups - >\$2M Series A



Oncology Big Exit Acquirers

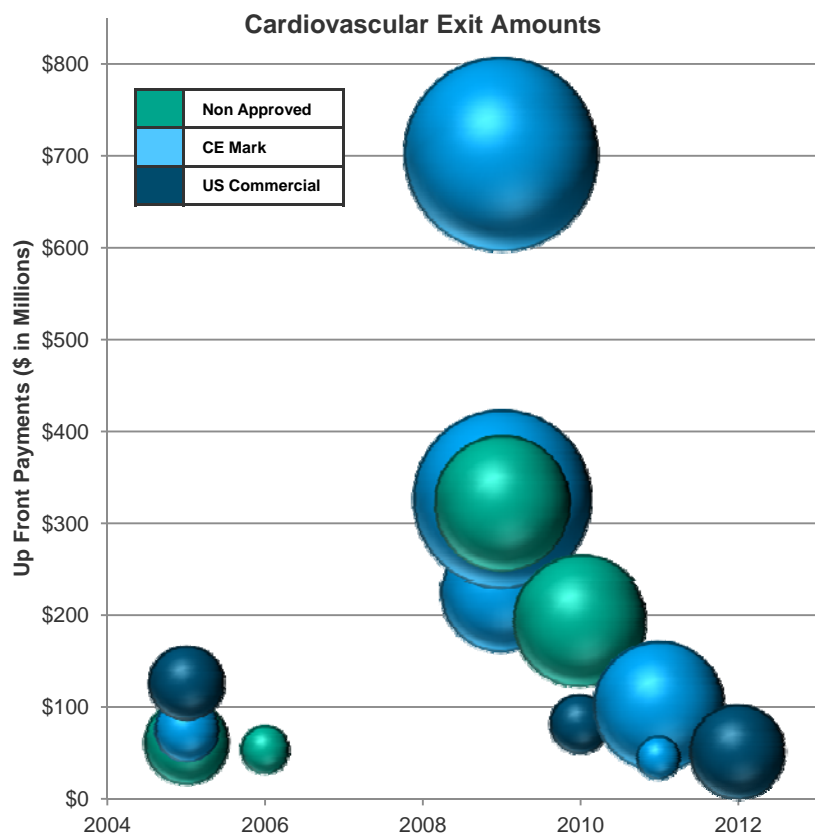
Company	# of Deals - Stage	Up Front Avg	All In Avg
Celgene	2 - Ph I; Comm	\$345	\$782
Cephalon	2 - Ph I; Ph II	\$192	\$362
Daiichi-Sankyo	2 - Pre; Ph II	\$520	\$593
Eisai	2 - Pre; Ph I	\$300	\$310
SANOFI	2 - Ph I; Ph I	\$137	\$442

Robust data set of exits since 2005 provides in-depth analysis and the ability to monitor and predict cyclical activity

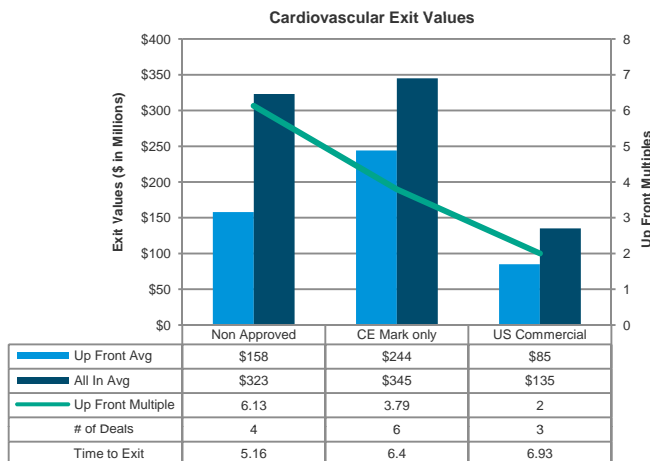


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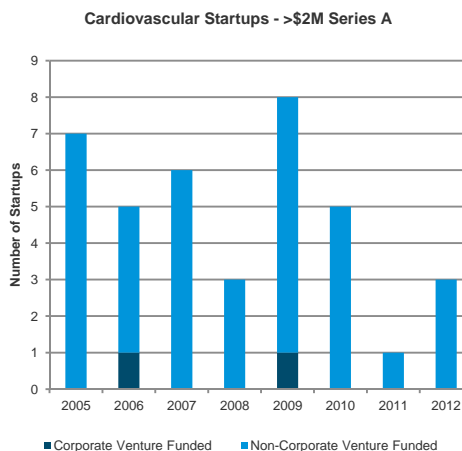
Cardiovascular Tear Sheet: Private Big Exits from 2005 - 2012



*Bubble Size represents total deal amount



Top VCs - rank	# of Investments
DELPHI VENTURES	3
NEA	2
SPLIT ROCK PARTNERS	2
De Novo VENTURES	2
USVP USA VENTURE PARTNERS	2



Top Acquirers			
Company	# of Deals	Up Front Avg	All In Avg
Boston Scientific	5	\$106	\$249
Medtronic	3	\$192	\$362

Exit Details:
 Boston: 2 Non Approved, 1 CE Mark, 2 Commercial
 Medtronic: 2 Non Approved, 1 CE Mark

Robust data set of exits since 2005 provides in-depth analysis and the ability to monitor and predict cyclical activity



Big Exits: 2005-Present. Biotech M&A Up Front >\$75M, Med Device/Services M&A Up Front>\$50M. "Up-Front": Up-Front defined as payments in a structured deal not including milestones. "Up-Front w/ Milestones": Up-Front defined as payments in a structured deal including milestones. "All-In": Deals where the total value is paid at the close of the transaction. Sources: Investment Bank Reports, Venture Source, Press Releases & discussions with Life Science professionals. Multiples are calculated based on all-in and up-front amounts and do not include milestones

Healthcare State of the Industry – A Balancing Act

Challenges

- Dollars raised by HC Venture is decreasing
- Dollars invested in HC Companies is decreasing
- Current Company Bottleneck:

\$38B venture \$s invested in **1600** still **private** HC companies started from 2000-2011

Opportunities

- Eight year highs in number of Big Exits and Total Deal Value in 2011/12!
- Decrease in Company Formation now means less competition for exit later.
- Milestone earn-outs hit at better than 45% - Structured Deals work for both investors and acquirers!

Healthcare State of the Industry – A Balancing Act

Prediction:

- A) Healthcare VCs with capital to deploy now are in prime position to generate excellent returns in this cycle!
- B) Companies that can obtain financing in this tough environment will find a continuing upswing in M&A/IPO and will be in a position to pursue multiple liquidity options.

Healthcare State of the Industry

THANK YOU!!!!