

Looking Back at 2009

Trends in Licensing and Partnerships

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Deloitte.



Overview

- Defining the BigCos of Licensing
- ‘The Surge’ - 4th Quarter Dealmaking
- Alliances with BigCos – 2005-2009
- Trends in Early Stage Deals
- Trends in Mid Stage Deals
- Trends in Late Stage Deals
- The Current Environment for Dealmaking
- Leading Practices in Business Development

Defining the BigCos of BioPharma Licensing

- Defining the *'BigCos'*

- Integrated Pharma, Specialty, and Biotech companies
- Revenue generating and profitable, Valuation in excess of \$1 billion

→ Top 40 BigCos sign 90% of deals, by total dollar value

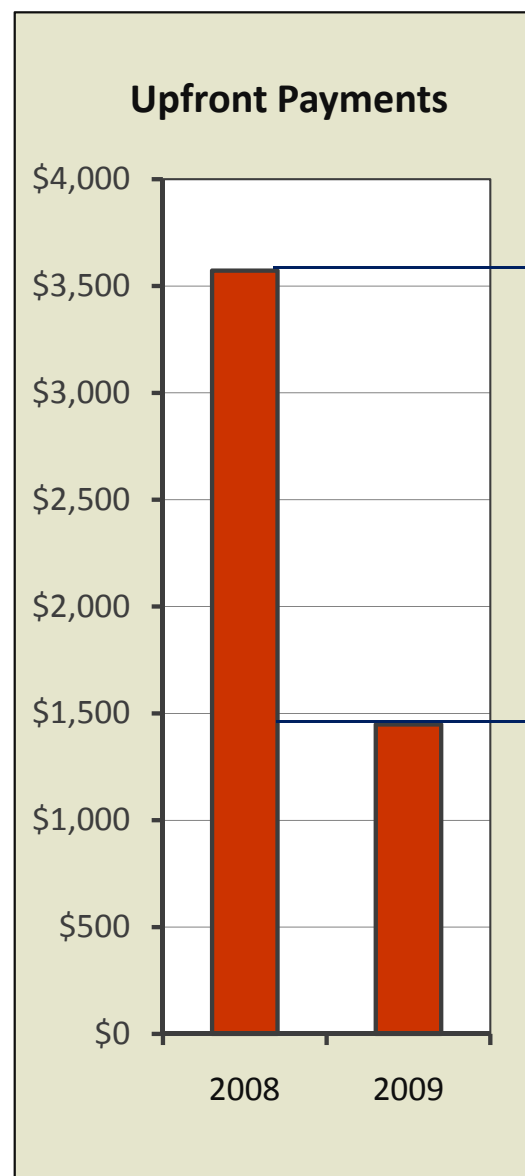
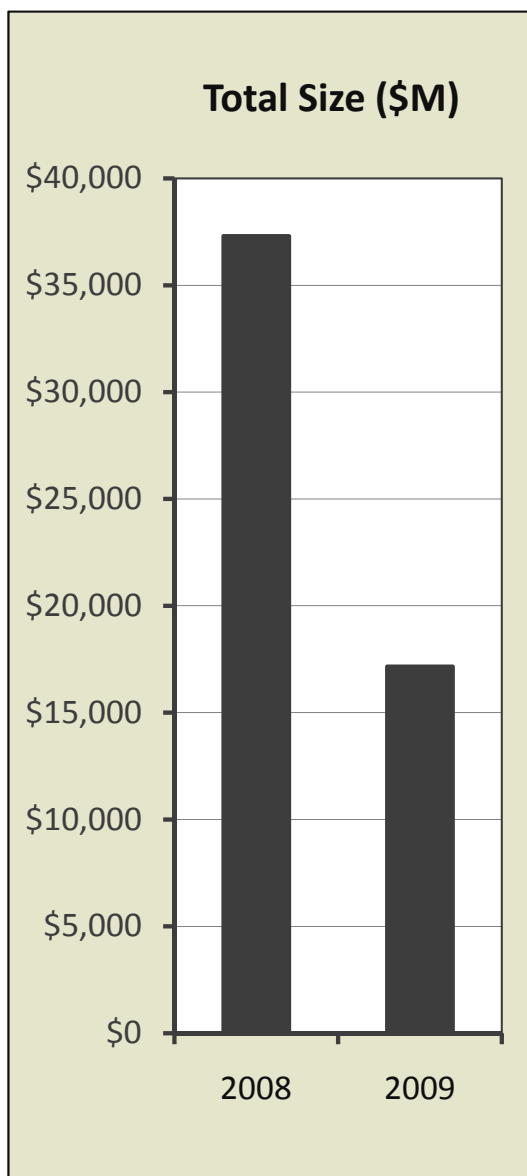
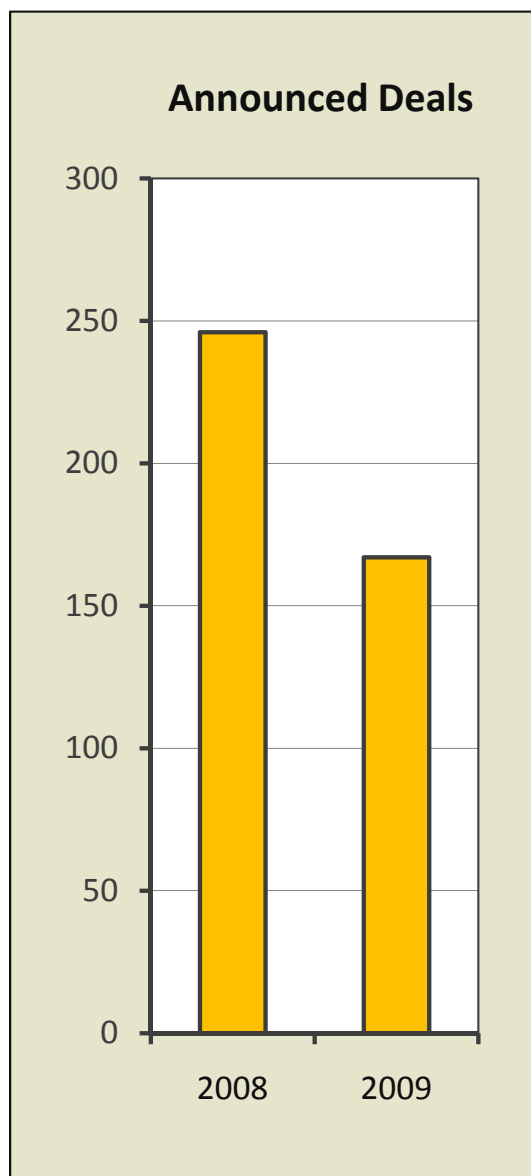
- BigCos In-licensing Deals (2005-2009)

- 60 active companies
- >90 total companies (subsidiaries & acquisitions)
- 1,824 alliances
- \$166 billion announced total value
- Payments in alliances (\$M)

	<u>Upfront</u>	<u>Equity</u>	<u>Announced Total</u>
2005-09 Total	\$17,395	\$3,955	\$177,249
Annual Average	\$2,941	\$609	\$33,219

Source: Deloitte Recap LLC

The Opportunity Identified in Q3 – *BioPartnering Europe 10/4/09*



**> \$2B
Shortfall**

Gap in payment of upfront fees from 2008 to 2009 may point to cash available in the budgets at BigCos in Q409.

BigCos may look to spend cash remaining in BD budgets before the end of year.

Source: Deloitte Recap LLC

'The Surge' – Dealmaking in the 4th quarter 2009

	<u># Deals</u>	<u>Total Amount</u>	<u>Upfront</u>
4 th Quarter 2009	75 Deals	\$15 billion	\$1.8 billion

Major Deals of the 4th Quarter

<u>Partners</u>	<u>Total</u>	<u>Upf.</u>	<u>Subject</u>
Novartis / Incyte	\$1,310	\$210	JAK inh. Ex-US & cMET inh. WW
AZ / Targacept	\$1,240	\$200	TC-5214 for depression
Takeda / Amylin	\$1,075	\$75	Pramlintide & others for obesity
BMS / Alder	\$1,069	\$85	ALD518 for RA
Astellas / Medivation	\$765	\$110	MDV3100 for prostate cancer
Lilly / Incyte	\$755	\$90	JAK1/JAK2 inh. For auto/inflam.
MLNM / Seattle Genetics	\$365	\$60	SGN-35 for Lymphoma ex-US & CAN

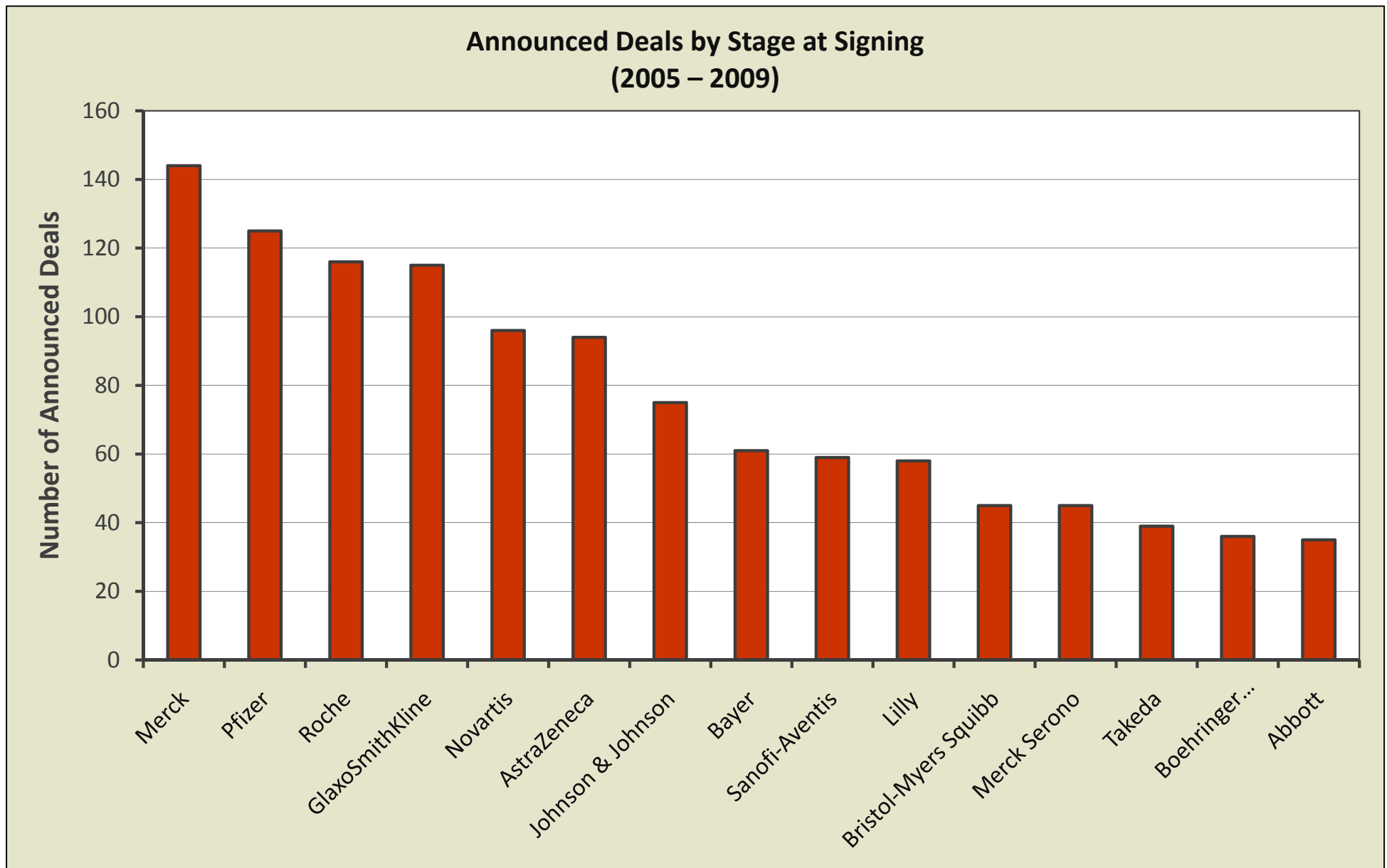
Source: Deloitte Recap LLC

'The Surge' – Dealmaking in the 4th quarter 2009

	<u># Deals</u>	<u>Total Size</u>	<u>Total Upfront</u>
Astellas	4	\$1,230	\$180
AstraZeneca	4	\$1,873	\$209
Bristol-Myers	2	\$1,069	\$85
GlaxoSmithKline	9	\$2,846	\$164
Lilly	2	\$755	\$90
Novartis	7	\$2,460	\$434
Pfizer	7	\$226	\$160
Sanofi-Aventis	6	\$1,962	\$97
Takeda	3	\$1,440	\$135
Teva	5	\$430	\$20
10 BigCos	55	\$14,291	\$1,574

Source: Deloitte Recap LLC

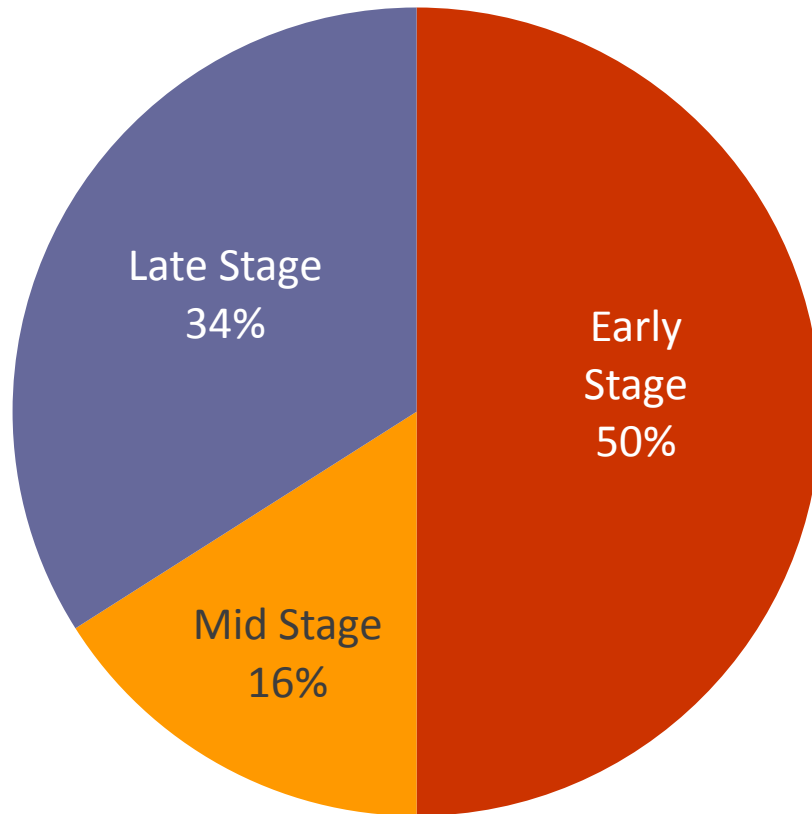
Top Licensees of Biotech Programs (2005-2009)



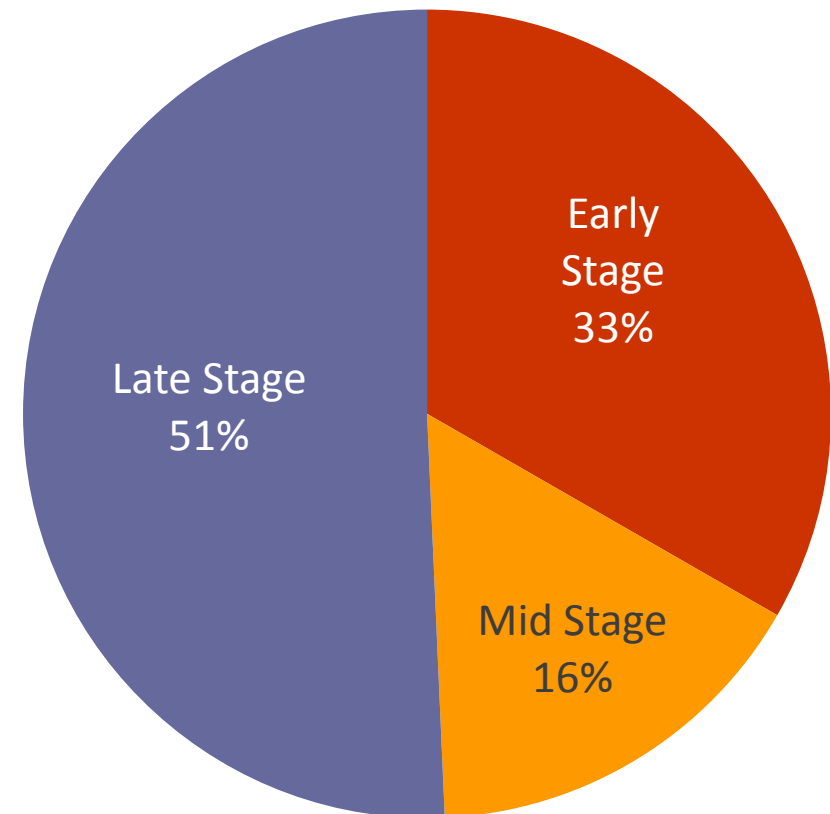
Source: Deloitte Recap LLC

BigCo Alliances in 2008 and 2009

5-year average 2005-09



4th Quarter 2009



Source: Deloitte Recap LLC

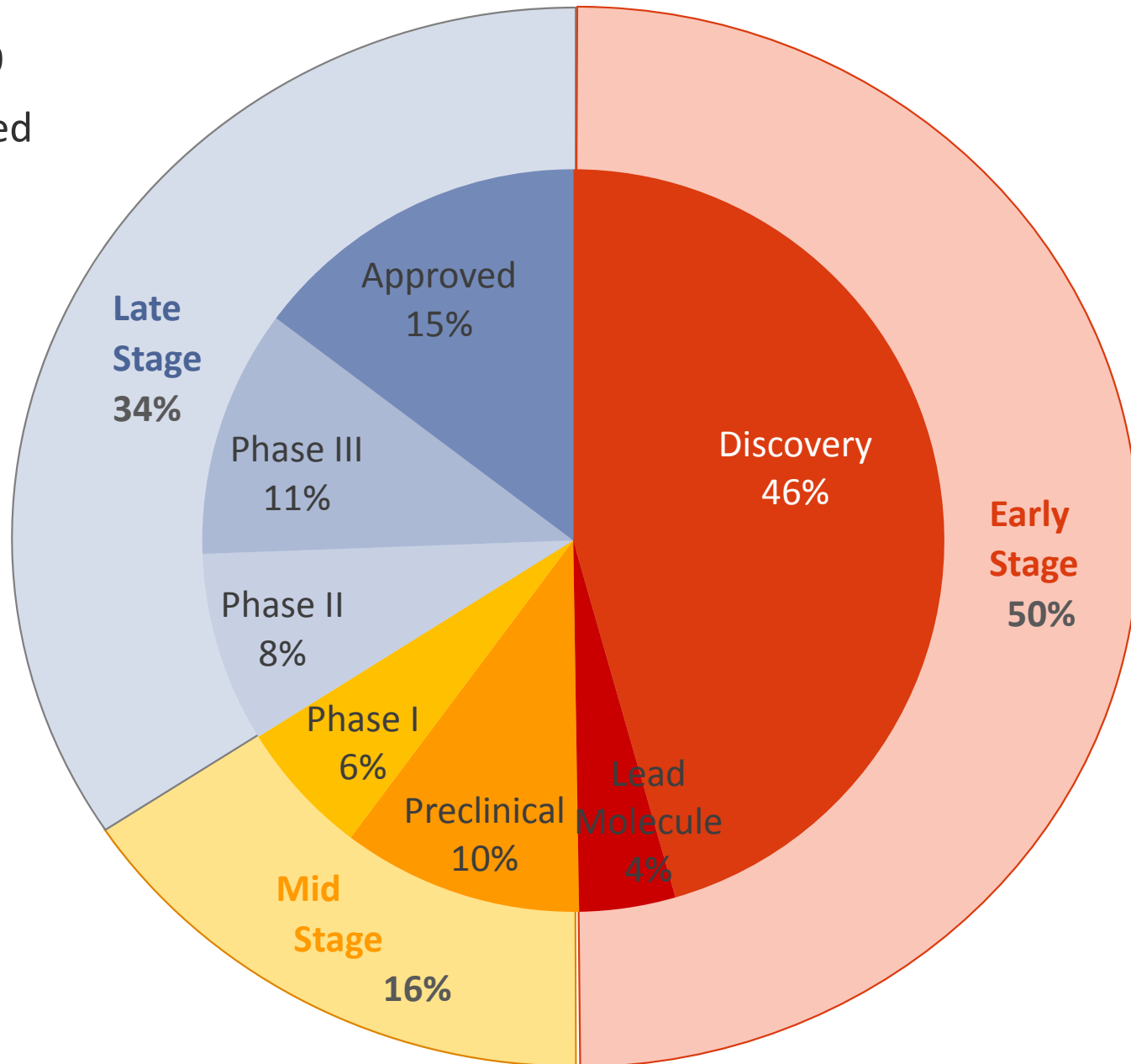
Biotech Alliances with BigCos

- Alliance from 2005 – 2009
 - 1,824 deals announced

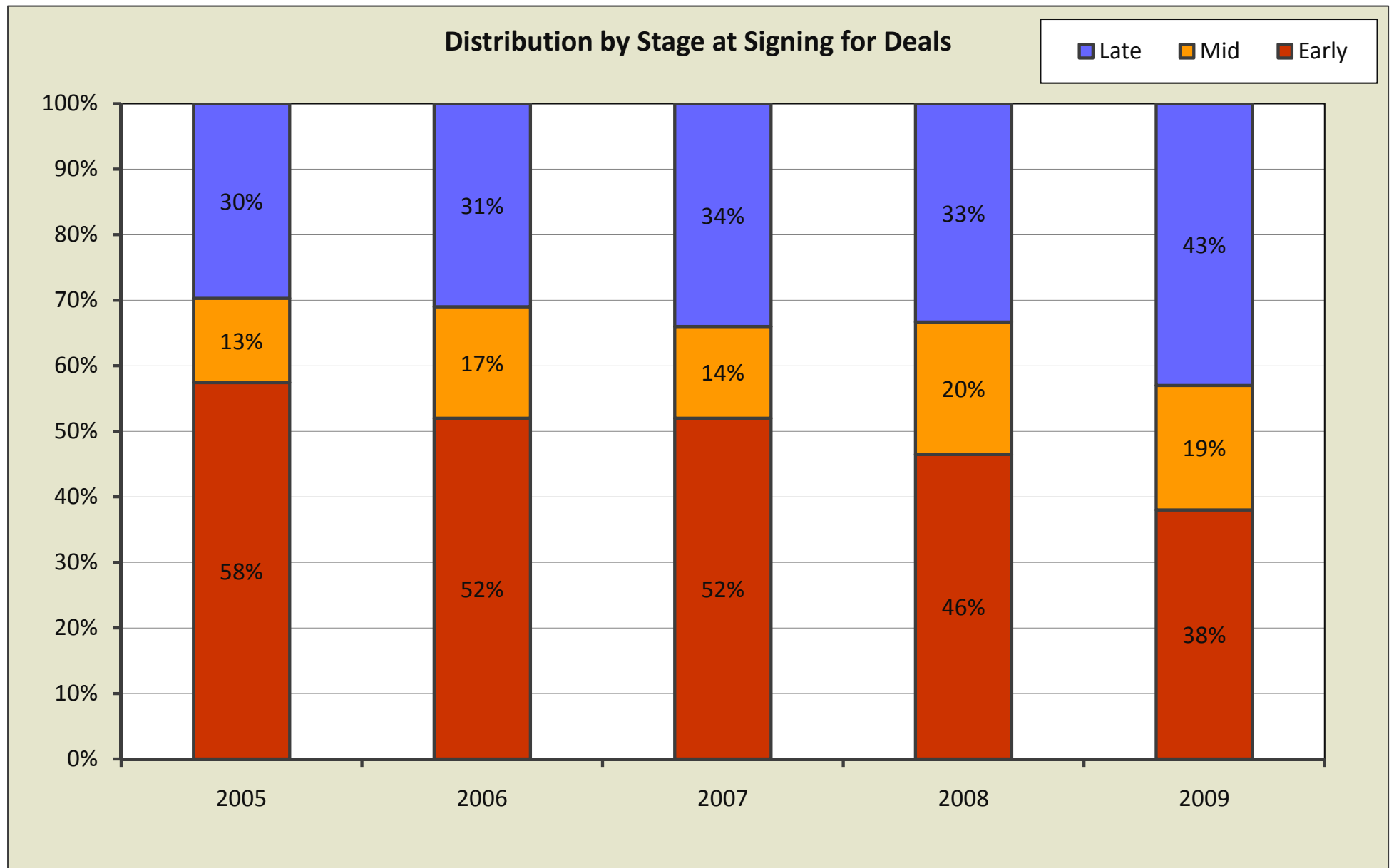
Stage at Signing of Deal

Discovery	832
Lead Molecule	76
Preclinical	191
Phase I	107
Phase II	151
Phase III	197
Approved	270

Source: Deloitte Recap LLC



Trends in BigCo In-licensing Deals

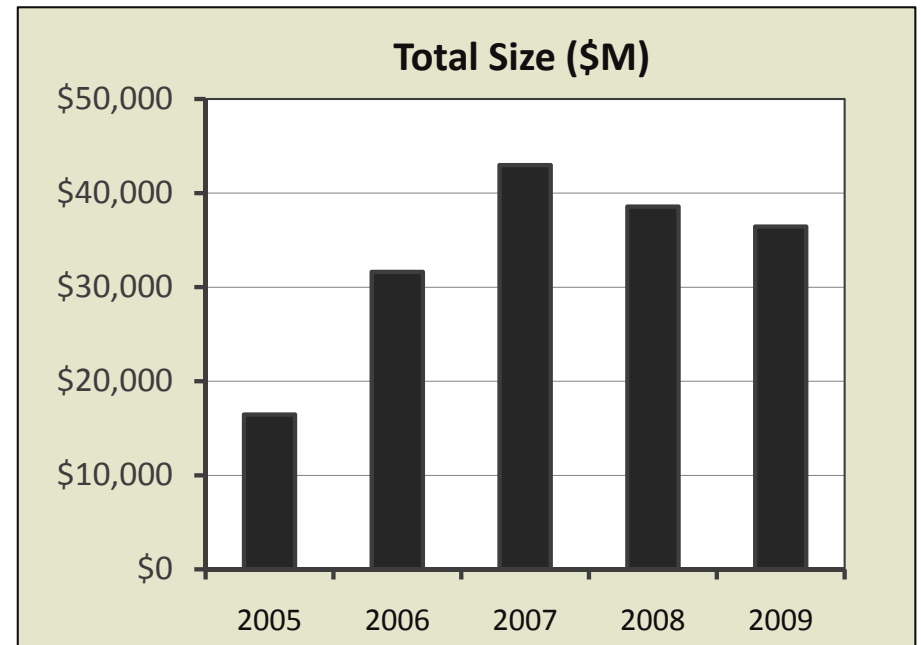
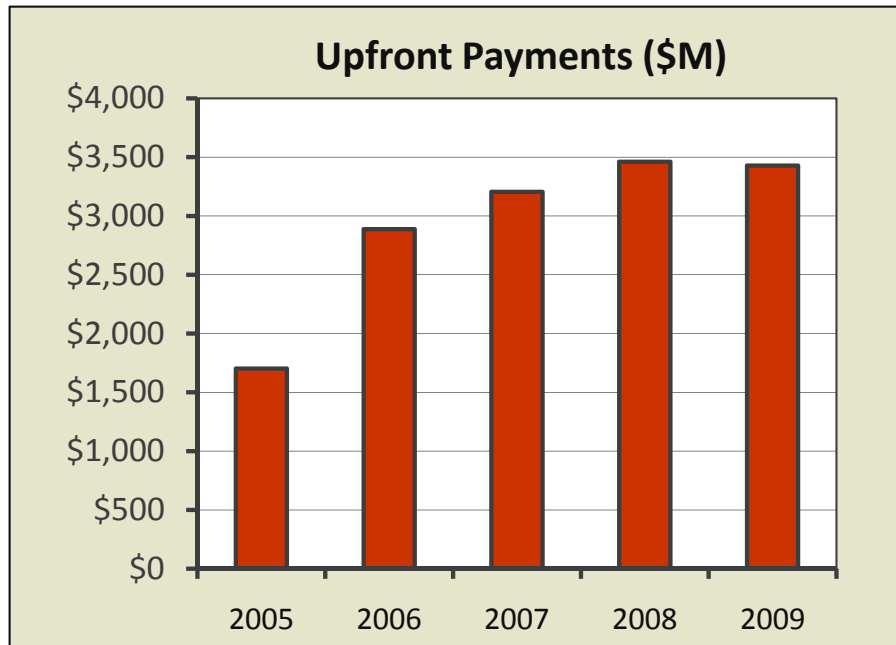


Source: Deloitte Recap LLC

5-yr Trends in BigCo In-Licensing Deals

Aggregate payments in alliances (\$M)

	<u>Upfront</u>	<u>Equity</u>	<u>Announced Total</u>
2005-09 Total	\$17,395	\$3,955	\$177,249
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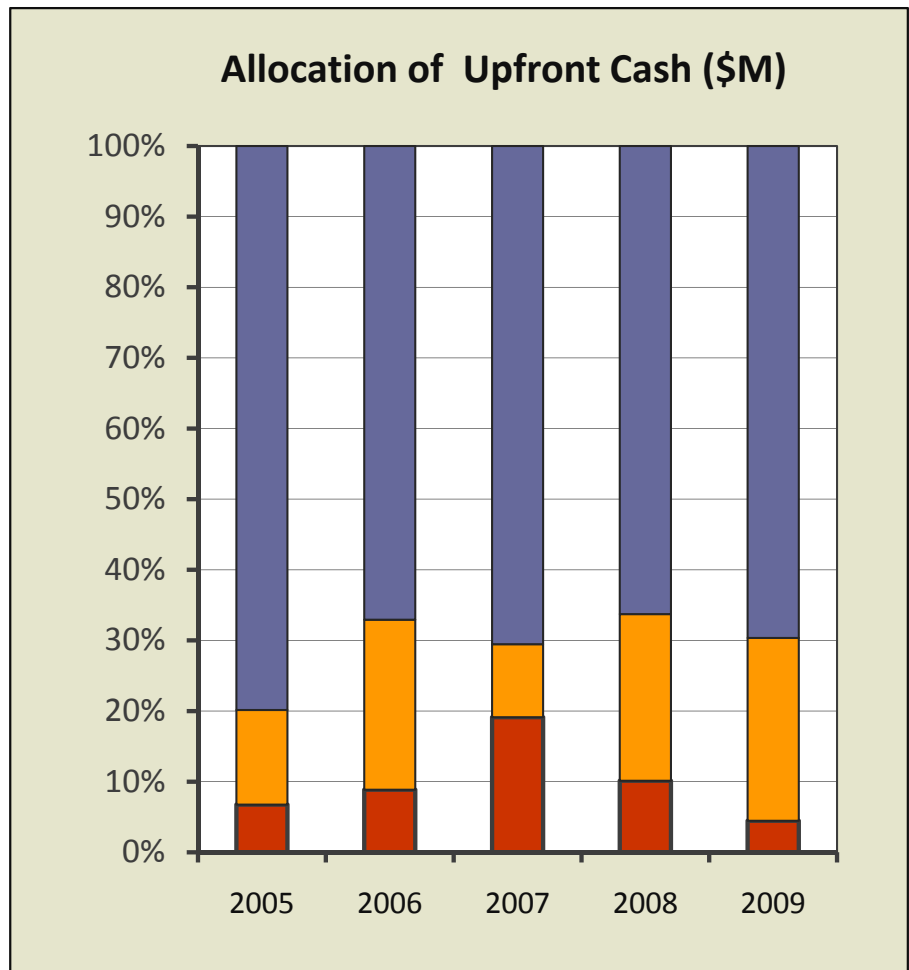
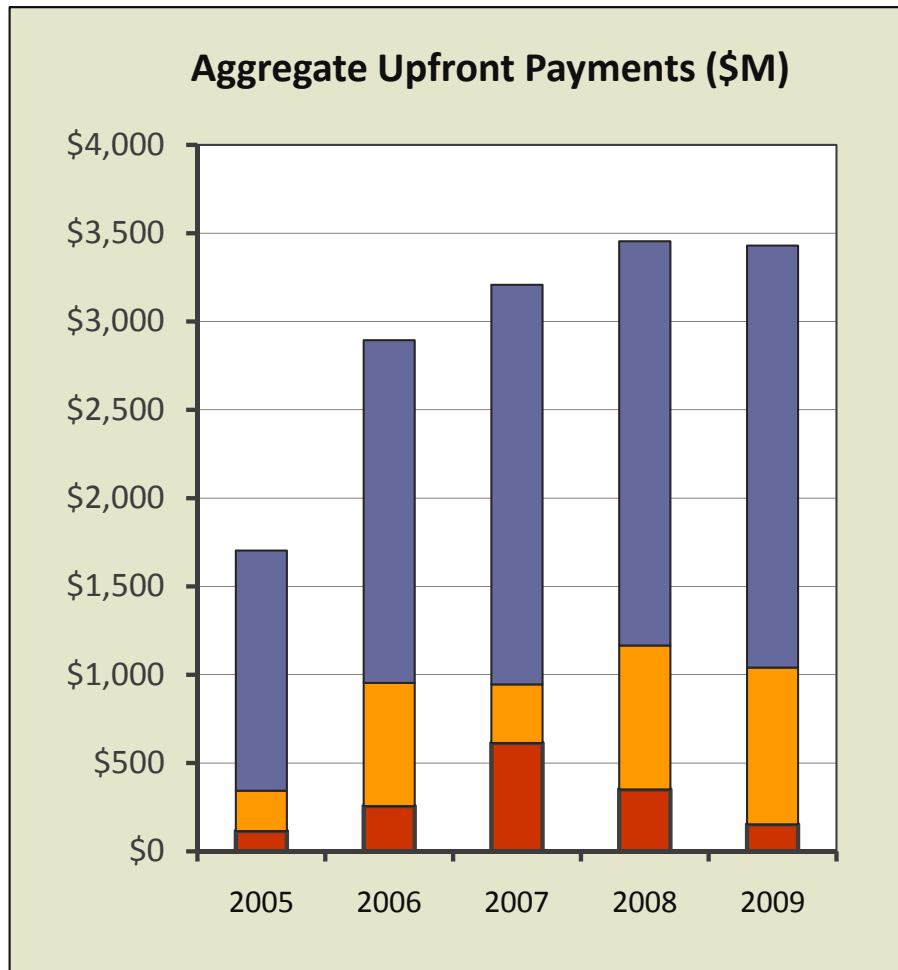


Source: Deloitte Recap LLC

Aggregate Upfront Payments in BigCo Alliances

- Late Stage (Ph 2 + later)
- Mid Stage (PreC + Ph 1)
- Early Stage (Disc + Lead)

5yr Avg.	Late Stage	70%
	Mid Stage	20%
	Early Stage	10%

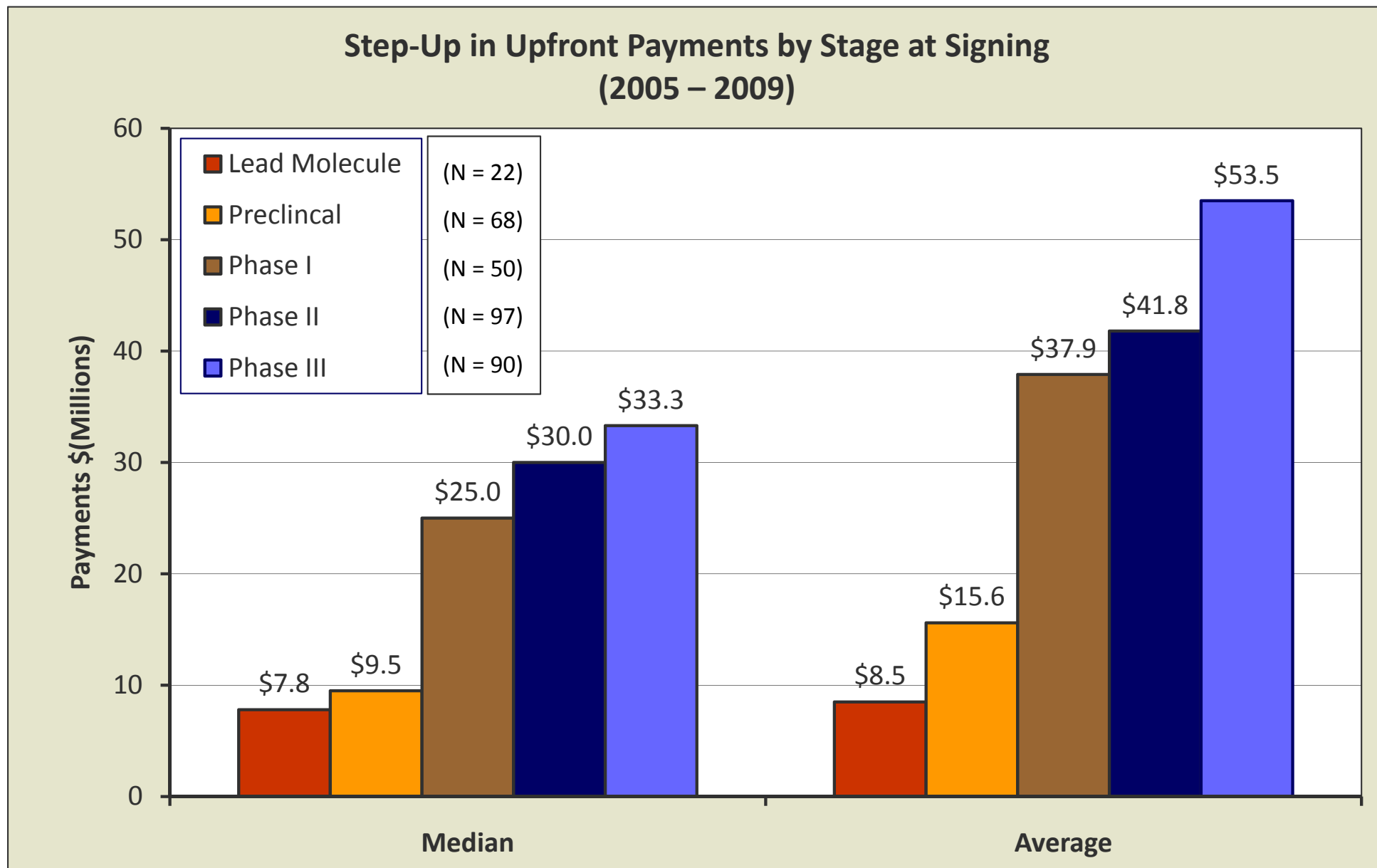


Source: Deloitte Recap LLC

Trends in Early, Mid, and Late Stage Deals

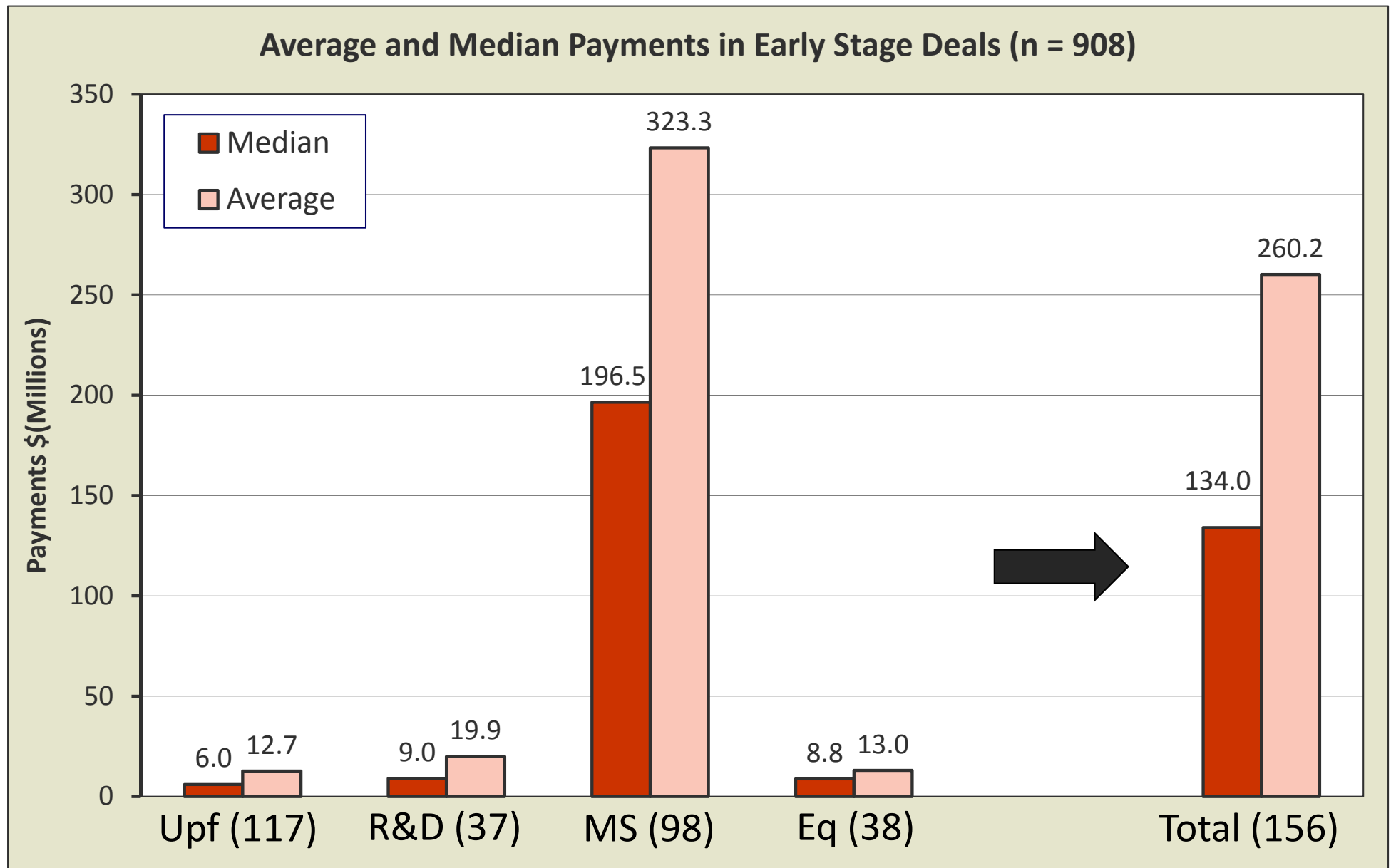
- **Early Stage (Discovery + Lead Stage)**
 - Average & Median Deal Terms
 - 5-yr Trends in Upfront Payments
 - Key Takeaways from the Analysis
- **Mid Stage (Preclinical + Phase I Stage)**
 - Average & Median Deal Terms
 - 5-yr Trends in Upfront Payments
 - Key Takeaways from the Analysis
- **Late Stage (Phase II Stage + later)**
 - Average & Median Deal Terms
 - 5-yr Trends in Upfront Payments
 - Key Takeaways from the Analysis

Payments in BigCo Alliances



Source: Deloitte Recap LLC

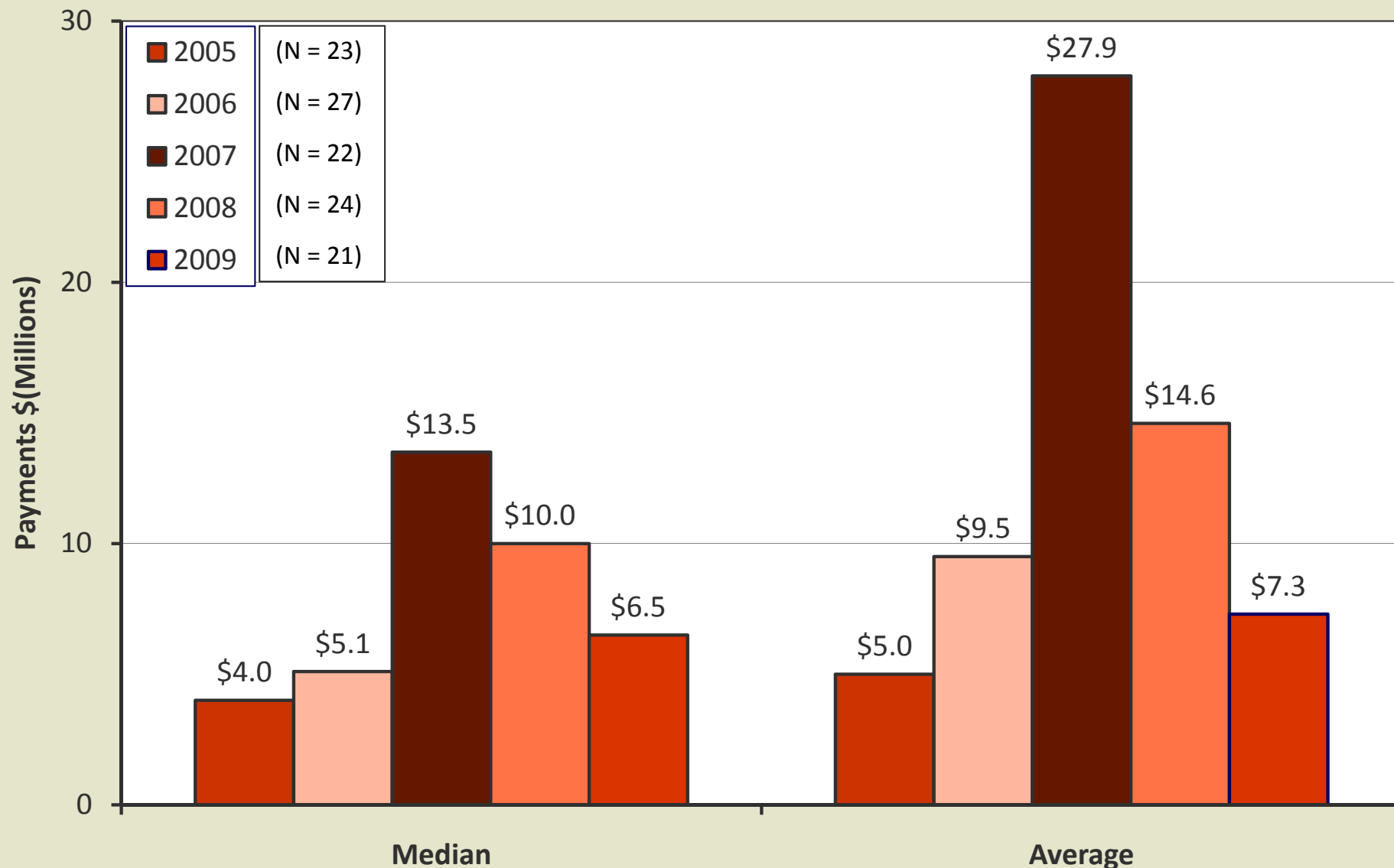
Payments in Early Stage BigCo Alliances 2005-2009



Source: Deloitte Recap LLC

Payments in BigCo Alliances – Early Stage Deals 2005-09

Median & Average Upfront Payments

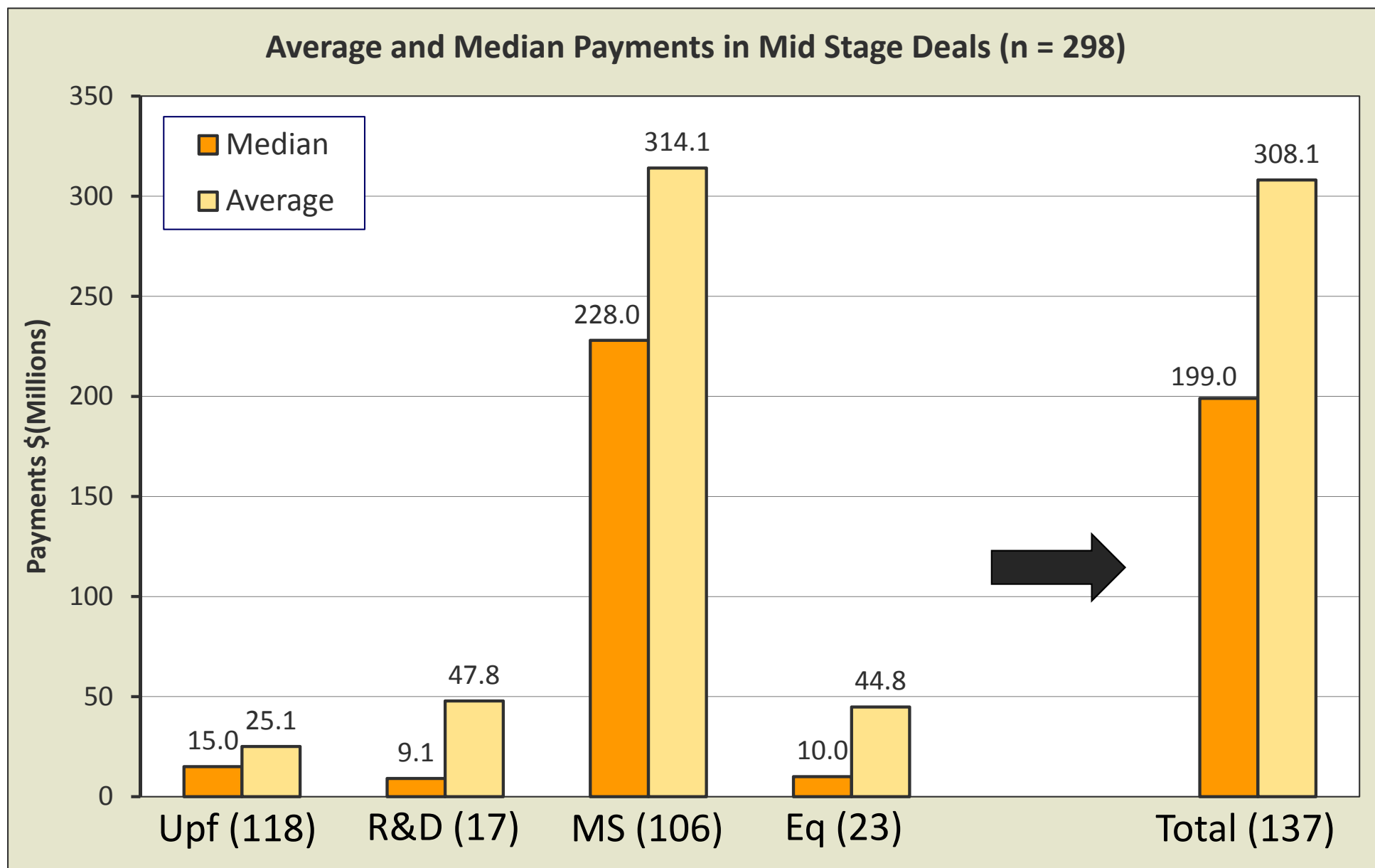


Source: Deloitte Recap LLC

Trends in Early Stage Deals

- Dealmaking peaked in 2007, and declined with the financial markets
 - Biotech companies were unable to raise money
 - They couldn't finance in-house research
 - They couldn't entertain co-development deals
- Pharma is looking for risk sharing structures for early stage partnering
 - Co-development and option-based alliances
 - Milestone payments at lead candidate selection and later
 - Major milestones occur at IND and PoC
- BD Positioning of early stage opportunities
 - Timelines are key – When will you hit major milestones?
 - Helps to have an established track record, proven results
 - Run a slow process, build BD Champion, identify key R&D contacts

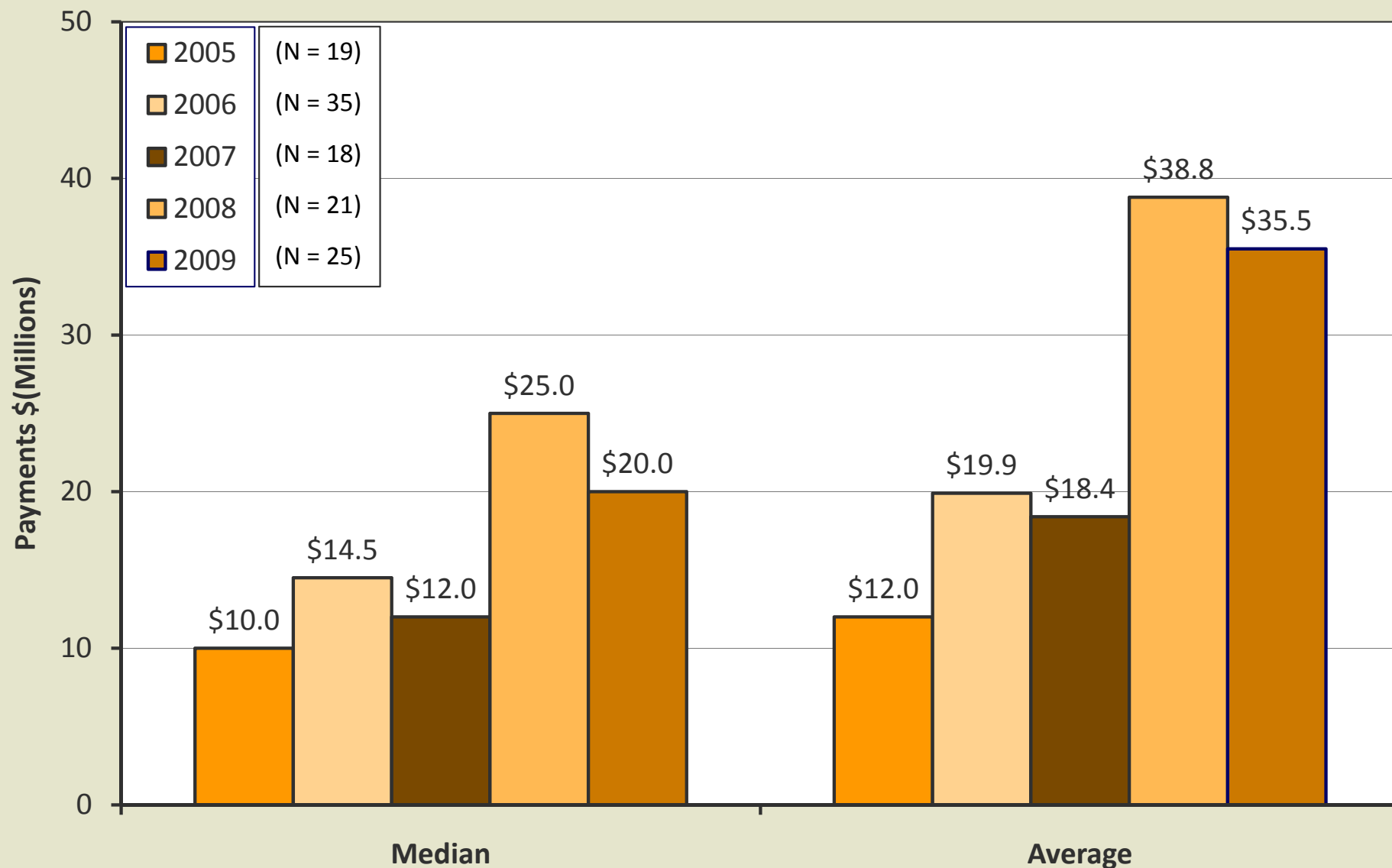
Payments in Mid Stage BigCo Alliances 2005-2009



Source: Deloitte Recap LLC

Payments in BigCo Alliances – Mid Stage Deals 2005-09

Median & Average Upfront Payments

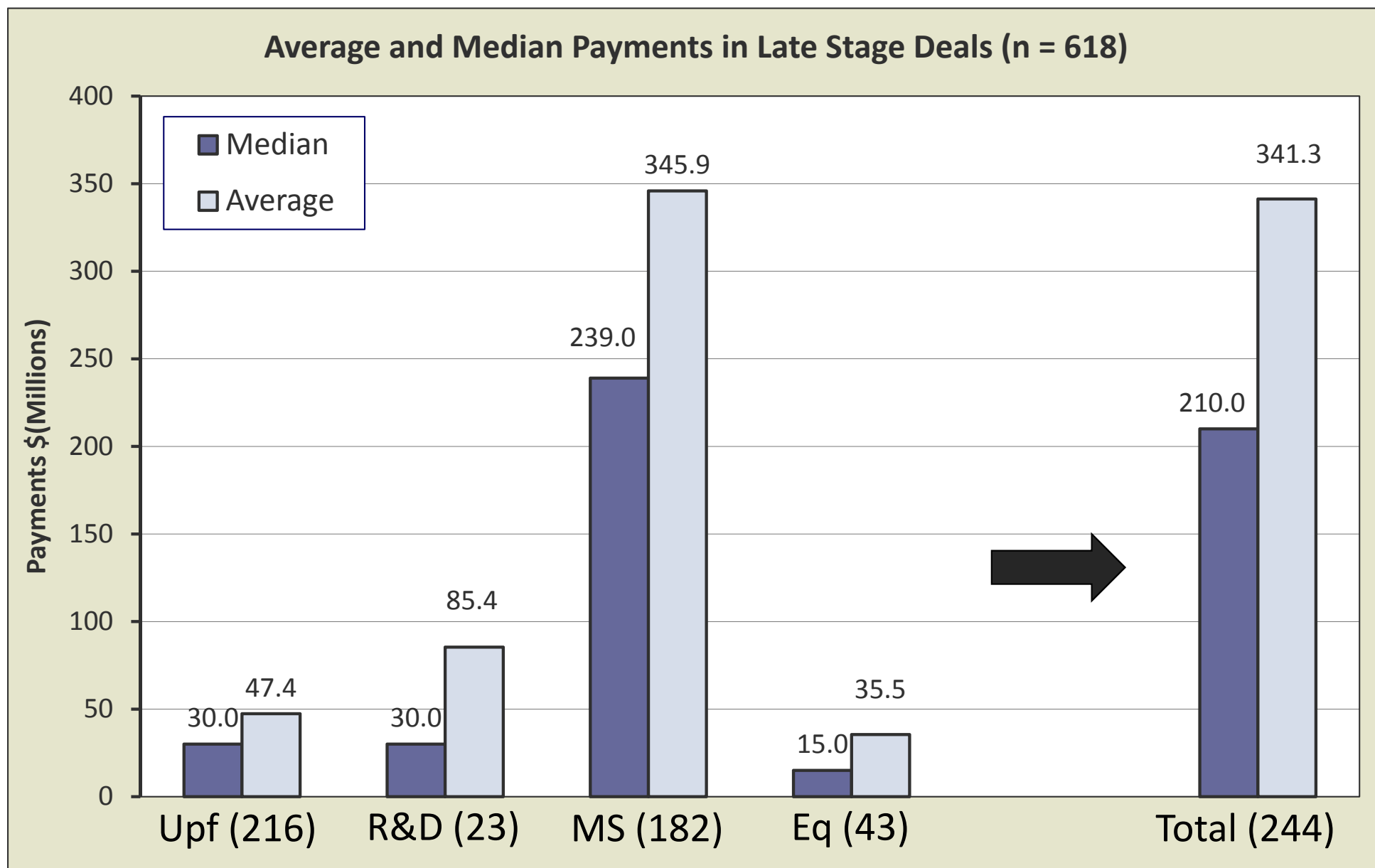


Source: Deloitte Recap LLC

Trends in Mid Stage Deals

- More deals occur at Preclinical stage (1.8x) compared to Phase I stage
- Value drivers for Preclinical deals
 - Novel target or mechanism of action
 - Back-up compounds with chemical diversity
 - Additional candidates in therapeutic area
- Phase I stage deals
 - Largest step-up in upfront payments (Lead to Phase III)
 - More opportunities for Co-Development and Co-Promote
- BD Positioning of mid stage opportunities
 - Strategy question – What are you looking for in the deal?
 - Assemble a clinical development plan (input from KOLs, Regulators, etc)

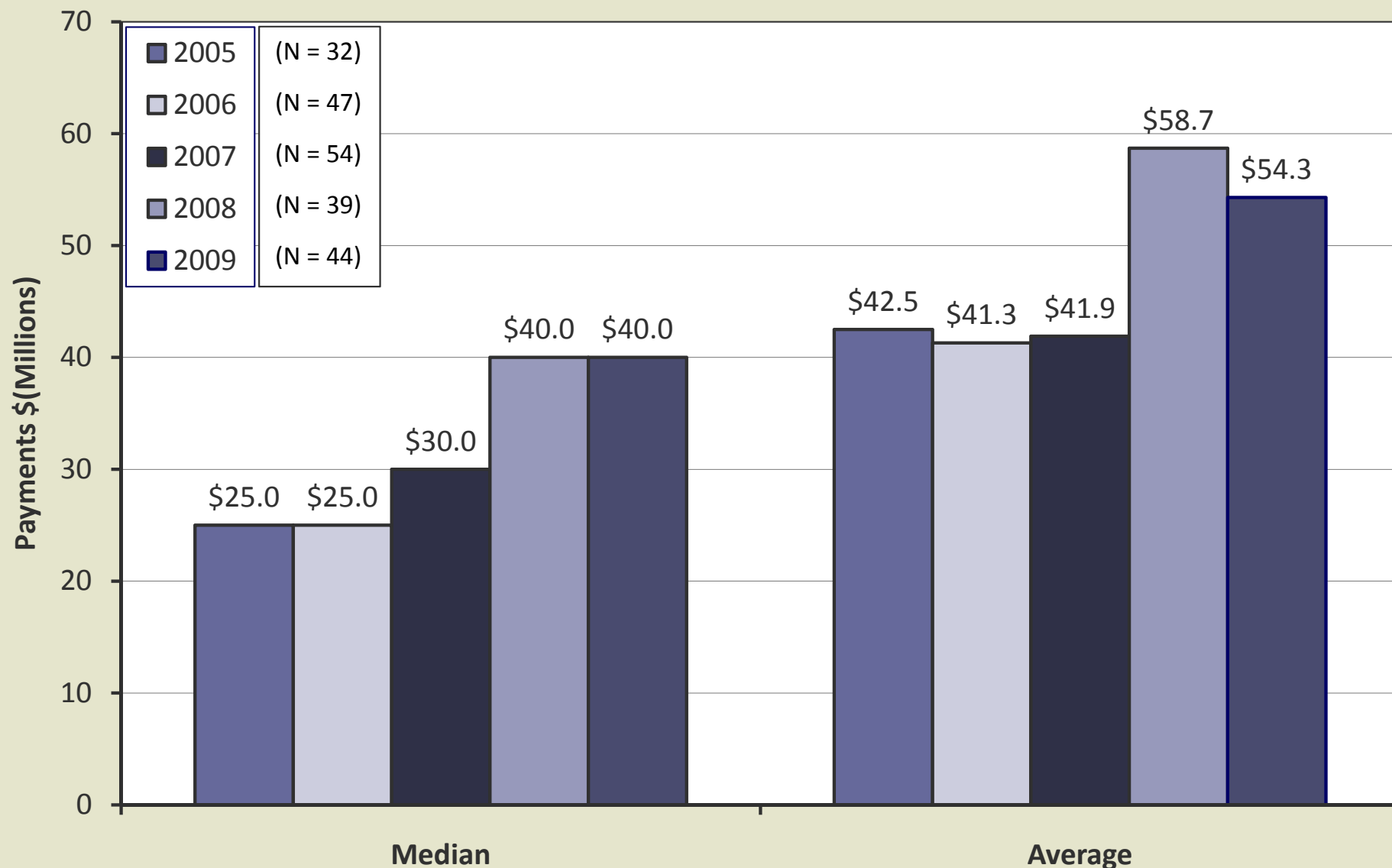
Payments in Late Stage BigCo Alliances 2005-2009



Source: Deloitte Recap LLC

Payments in BigCo Alliances – Late Stage Deals 2005-09

Median & Average Upfront Payments



Source: Deloitte Recap LLC

Trends in Late Stage Deals

- Valuations have steadily increased since 2001
- High end of the marketplace is still being defined
 - What is the appropriate NPV sharing for a late stage asset?
- Value drivers for PoC stage deals
 - Well planned Phase I and II strategy, de-risk the asset
 - Emerging TAs or first in class therapies
 - Some TAs just require a true Phase III (Cardio, Infection)
- BD Positioning of early stage opportunities
 - Build the story over time, prepare partners for data releases
 - Identify all of the critical questions, have answers ready
 - Manage the internal stakeholders, dial down expectations
 - Create a competitive bidding environment

Some Additional Observations from the Analysis

Trends of the 15 Top BigCos relative to the remaining 45

- The do more early stage deals (discovery in particular)
- The sign more preclinical stage deals (target PoC, often with backups)
- They pay less cash upfront
- The deals are larger in total size

Trends in Mid-Cap Pharma and Specialty Pharma

- Higher number of regional licensing deals
- Attempt pre-emptive licensing
- They recognize significant strategic value in a program and elect to do a deal earlier than the top companies, and overpay to get the deal done
- But in many case they offer strategic advantages because the asset will be a higher priority in development & commercialization

Source: Deloitte Recap LLC

Getting Prepared to Partner

Gather information from potential partners

- **What are the critical questions about your program?**
- How can you answer/address these questions?
- Support with R&D, market research, KOLs, reimbursement and regulatory

Prepare partnering materials and run an efficient process

- **What role does the asset have in corporate development?**
- What structure are you looking for?
- Summarize and prepare a 5 minute pitch

Utilize a top down approach with BD and R&D Champions

- Establish contacts and be prepared to answer the critical questions
- **The program should be able to sell itself**

Research the deal history of negotiating partners

- **Understand the types of deals the partner has done**
- Plan for similar deal structure and valuation



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