EP vantage
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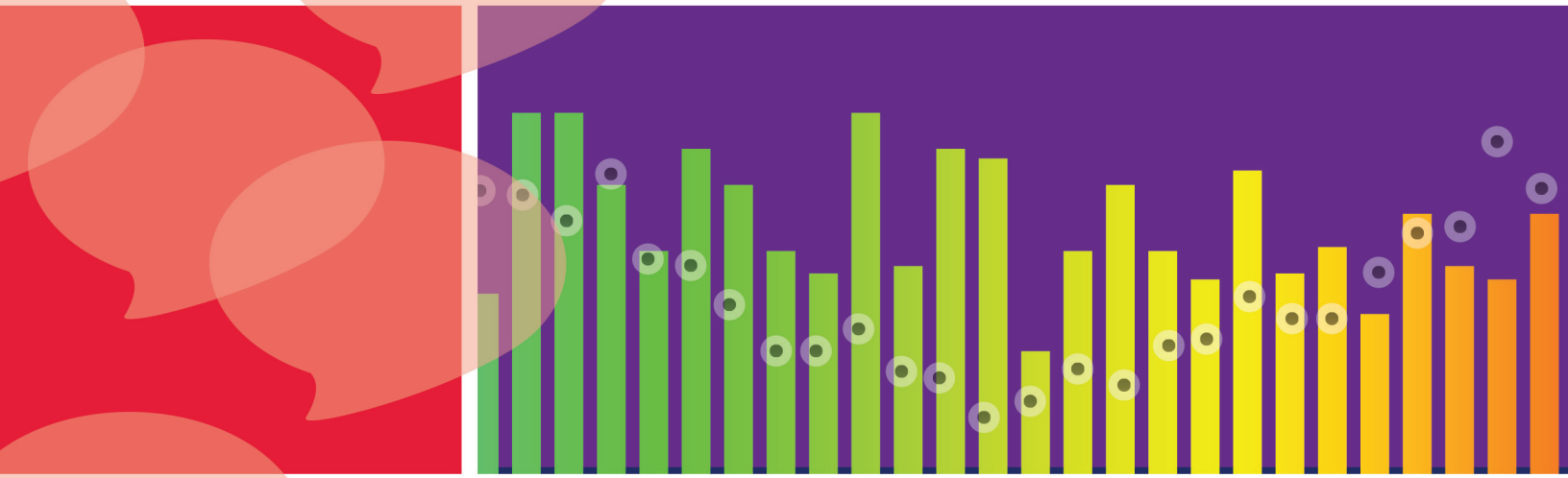
Biotech and Pharma

2012 YEAR IN REVIEW



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FOREWORD

Welcome to *EP Vantage's* review of pharma and biotech performance in 2012. In this extensively researched report we have identified some of the key trends that defined the industry in 2012, a year that could be remembered as a turning point for recession-hit pharma and biotech.

Our analysis shows that one of the biggest factors that affected pharma companies last year was the easing of the patent cliff, which heralded a return of investors to the sector. The report also reveals that biotech too benefited from investors' rediscovered appetite for risk – this was reflected in the heady share price gains that saw US biotech valuations hit levels last seen before the start of the fiscal crisis.

Indeed, the Nasdaq Biotechnology Index finished the year up 32%. While no one is yet calling the top of the biotech market, this flurry of interest has caused more bearish analysts to warn that US biotech prices are perhaps now too high and the sector is in danger of being overvalued.

While US biotechs may have fared well, among the large cap pharma companies the report found that it was a European company, Germany's Bayer, which claimed the crown as the best performing share across the major stock market indices. The overall strength of the large cap pharma sector in 2012 was demonstrated by the fact that only three large cap stocks reported a decline during the year, led by GlaxoSmithKline.

Along with rising stock prices for many companies, the other tentative signs of recovery sighted in 2012 included a rise in venture capital funding in the fourth quarter, again indicating an increased willingness to invest in the sector. There was also slight growth in the number of companies willing to brave the markets. If this trend continues 2013 could finally be the year when the IPO window starts to open again and, more importantly for smaller companies, stays open.

The report also shows that those working in R&D were rewarded for their efforts, as FDA approval rates surged. A more efficient and well-staffed agency ushered through an impressive 43 novel medicines in 2012, the highest number since 1997. Among the products that got the green light were a number of potential blockbusters, including Roche's breast cancer drug Perjeta, Pfizer's rheumatoid arthritis pill Xeljanz and Vertex Pharmaceuticals' cystic fibrosis drug, Kalydeco.

However, there were negatives among the positives. Our scrutiny of the amount of money spent on licensing deals showed a 19% year-on-year decline, with only $20.9bn paid out by companies trying to fill pipelines, and the number of products licensed also fell dramatically. The more bullish might argue that the reduced licensing activity was a function of companies no longer needing to buy as the patent cliff was negotiated.

FOREWORD

This might also have been one of the reasons why M&A activity was down to its lowest level since 2009, if the megamergers of Merck & Co and Schering-Plough and Wyeth and Pfizer are excluded.

Looking ahead into the rest of 2013, few are expecting a big upturn in M&A; if anything the trend started by Pfizer and Abbott Laboratories to downsize their operations might continue. While investment bankers might be disappointed, industry watchers should be encouraged by other events including the expected big-ticket drug launches this year. Roche's breast cancer drug Kadcyla has already made it to market and there are still potential blockbusters in the form of Biogen Idec's MS drug Tecfidera and Glaxo's HIV drug dolutegravir waiting in the wings.

So the hope will be that, despite the on-going economic uncertainty, pharma and biotech companies will sustain the tentative momentum shown in 2012.

Regards,

Lisa Urquhart
Editor, EP Vantage
LisaU@epvantage.com

LOOKING AHEAD INTO THE REST OF 2013, FEW ARE EXPECTING A BIG UPTURN IN M&A; IF ANYTHING THE TREND STARTED BY PFIZER AND ABBOTT LABORATORIES TO DOWNSIZE THEIR OPERATIONS MIGHT CONTINUE.

PHARMA IN 2012

What a difference a year makes. The pharma and biotech industry ended 2011 falling off a precipitous patent cliff and mired in uncertainty about the fallout of the ongoing global economic turmoil, only to exit 2012 on a decidedly more positive note.

Substantial amounts of money were raised last year – particularly in the US – and share prices recovered strongly, with North American biotechs basking in valuations unseen since before the banking crisis. This signalled the return of investors' appetite for risk; evidence for this could also be found in M&A deal multiples and venture capital data in the final quarter of the year. Meanwhile the FDA approved a record number of novel medicines, helping the pharma industry's R&D productivity image problem.

Not all was rosy, of course. Acquisitions and product deal activity remained subdued last year, and for many smaller drug developers – particularly in Europe – cash was still far from easy to find. Heading into 2013 those working in life sciences will be hoping that the promise seen in 2012 becomes even stronger as the year progresses. In the meantime, *EP Vantage* has reviewed its analyses of 2012 to see what the data held, and what they might foreshadow for the coming 12 months.

Unless stated, all data is sourced to EvaluatePharma® and was accessed February 2013. It excludes medtech and diagnostic deals and focuses specifically on human therapeutics.

ACQUISITIONS AND PRODUCT DEAL ACTIVITY REMAINED SUBDUED LAST YEAR AND FOR MANY SMALLER DRUG DEVELOPERS – PARTICULARLY IN EUROPE – CASH WAS STILL FAR FROM EASY TO FIND.

MARKET UPS AND DOWNS

In terms of stock market performances, pharma and biotech put on a strong show last year, outperforming broader indices. In the US biotech stocks stormed ahead, investor enthusiasm seemingly unaffected by ongoing economic concerns; the Nasdaq biotechnology index ended up an incredible 32%.

Percentage Change in Stock Indices Over 2012

Stock Index	% Change in 2012
NASDAQ Biotechnology (US)	32%
Euro STOXX 50	14%
Dow Jones STOXX Healthcare (EU)	12%
S&P Pharmaceuticals (US)	11%
DJIA	7%

Economic uncertainty does enforce pharma's defensive characteristics, but many believe that several companies in the biotech space now look distinctly overvalued. A wobble last October failed to take much heat out of the market, and valuations show no sign of retreating.

Among the industry's biggest players Bayer stood out last year. The German conglomerate rebounded from a poor 2011 with a boost from its eye drug Eylea, to notch up a 45% increase in its share price. Novo Nordisk was not far behind, although more recently the diabetes specialist has been knocked back by the FDA over its new insulins, an event that could well prompt a re-rating for this highly valued stock.

The strength of the large cap sector was illustrated by the dearth of significant fallers over the year; GlaxoSmithKline was the worst performer, with a 9% decline.

Outside the big caps, some beasts of biotech stood out. Regeneron, Bayer's partner over Eylea, more than tripled in value to $16bn, while Gilead's emerging strength in hepatitis C helped the antiviral specialist almost double in value. Gilead is currently valued at $69bn, more than several traditional big pharma companies, including Bristol-Myers Squibb, Eli Lilly and AstraZeneca.

Big Pharma Top Risers and Fallers in 2012

		Share Price (local currency)			Market Capitalisation ($bn)	
Rank	**Top 3 Risers**	**31-Dec-11**	**31-Dec-12**	**Change**	**31-Dec-11**	**31-Dec-12**
1	Bayer (€)	49.50	71.86	45%	55.9	77.1
2	Novo Nordisk (DKr)	645.34	916.50	42%	57.5	72.1
3	Amgen ($)	64.21	86.20	34%	50.9	66.1
Rank	**Top 3 Fallers**					
1	GlaxoSmithKline (£)	14.72	13.35	(9%)	117.1	105.3
2	Teva Pharmaceutical Industries ($)	40.36	37.34	(7%)	38.0	35.2
3	Bristol-Myers Squibb ($)	34.90	32.59	(7%)	59.7	53.8

Among smaller companies the obesity player Arena was rewarded for FDA approval of its pill with a fivefold increase in value to almost $2bn – though whether either of the newly approved weight loss agents live up to expectations remains to be seen – while Pharmacyclics, inventor of a promising anticancer treatment, saw its share price quadruple.

Meanwhile, Sarepta, an orphan player, demonstrated value in the niche, becoming the best performing life science stock last year with an eightfold surge in its market cap to $755m. The muscular dystrophy researcher capitalised on the gains by tapping the markets in what was one of the biggest equity financings of the year, raising $118m to fund its research.

Drug development would not be what it is without setbacks, and last year naturally saw plenty of these too. Elan faced up to the failure of its Alzheimer's project bapineuzumab, which erased a quarter of its market value and has since prompted a major shakeup at the drug maker. Elan has been left fending off what it terms an "opportunistic" takeover bid from the private equity group Royalty Pharma.

Questcor saw the Acthar bubble burst as doubts mounted about the broad applicability of the drug, approved to treat a wide range of illnesses related to multiple sclerosis and arthritis. Elsewhere, Anthera was hit by the failure of two late-stage drug candidates, while Chelsea's inability to get Northera to the market destroyed its market value, although its stock has since rebounded thanks to a change of heart at the FDA over data that will allow a refiling. Cardiome suffered heavily as its partner Merck retreated from a deal over an oral version of the atrial fibrillation drug vernakalent.

Other Significant Risers and Fallers in 2012

Rank	Top 5 Risers	Share Price (local currency) 31-Dec-11	31-Dec-12	Change	Market Capitalisation ($m) 31-Dec-11	31-Dec-12
1	Gilead Sciences ($)	40.93	73.45	79%	30,744	55,649
2	Regeneron Pharmaceuticals ($)	55.43	171.07	209%	5,015	16,161
3	Pharmacyclics ($)	14.82	57.78	290%	1,016	4,020
4	Arena Pharmaceuticals ($)	1.87	9.02	382%	273	1,960
5	Sarepta Therapeutics ($)	4.50	25.80	473%	101	755
Rank	**Top 5 Fallers**					
1	Elan ($)	13.74	10.21	(26%)	8,094	6,068
2	Questcor Pharmaceuticals ($)	41.58	26.72	(36%)	2,644	1,562
3	Chelsea Therapeutics ($)	5.13	0.76	(85%)	317	51
4	Anthera Pharmaceuticals ($)	6.14	0.62	(90%)	251	49
5	Cardiome Pharma (C$)	2.68	0.39	(86%)	161	24

Ranked on Market Cap.

Top 5 Risers	EP Vantage Comment and Analysis
Gilead Sciences ($)	AASLD – Gilead hits new high with a little help from its friends
Regeneron Pharmaceuticals ($)	Zaltrap in Europe should mean a payday for Regeneron – but pricing is problematic
Pharmacyclics ($)	Asco EventAnalyzer - 2012's winners and losers
Arena Pharmaceuticals ($)	Arena fends off the big question as lorcaserin delivers
Sarepta Therapeutics ($)	Sarepta's step forwards in muscular dystrophy raises the bar for competitors
Top 5 Fallers	
Elan ($)	Phase III bapi failure opens up Russian roulette opportunity
Questcor Pharmaceuticals ($)	Questcor's Acthar fairy tale goes sour
Chelsea Therapeutics ($)	Investors kick Chelsea after it trips on its Northera data again
Anthera Pharmaceuticals ($)	Anthera springs back to life but more surprises likely
Cardiome Pharma (C$)	Merck's call on vernakalant a blow to Cardiome

EUROPEAN IPO SHUT OUT

2012 – in particular its latter half – certainly bore the hallmark of a recovery for US drug makers as the IPO window creaked open and the public markets loosened their purse strings. But companies operating in Europe will be less inclined to agree with this sentiment, as life remained tough across the pond. Unfortunately for smaller European drug developers, austerity measures and risk aversion look set to remain big themes for 2013, and cash will be no easier to come by.

According to data collected by *EP Vantage*, 16 companies focusing on human therapeutics floated last year, up from 13 in 2011. Most of these did so in the US and most had to take a "haircut" – accept a lower valuation than they had initially wanted – but the group has largely performed well since then.

2012 Biotech IPOs on Western Stock Exchanges

Company	Amount Raised	Offering Price	Range	Discount/Premium	Exchange	2012 YE Change Since Float
Puma Biotechnology	$120m	$16.00	NA	NA	NYSE	17.19%
Merrimack Pharmaceuticals	$100.1m	$7.00	$8-10	(22.20%)	Nasdaq	(13.00%)
Tesaro	$81m	$13.50	$12-15	0.00%	Nasdaq	25.56%
Intercept Pharmaceuticals	$75m	$15.00	$13-15	7.10%	Nasdaq	128.27%
Kythera Biopharmaceuticals	$70.4m	$16.00	$14-16	6.70%	Nasdaq	89.63%
Durata Therapeutics	$67.5m	$9.00	$11-13	(25.00%)	Nasdaq	(15.11%)
Verastem	$55m	$10.00	$9-11	0.00%	Nasdaq	(12.10%)
DBV Technologies	€ 40.5m ($53.7m)	€ 8.86	€ 8.86-10.82	(10.00%)	NYSE Euronext Paris	(7.45%)
Cempra	$50.4m	$6.00	$11-13	(50.00%)	Nasdaq	6.67%
Supernus Pharmaceuticals	$50m	$5.00	$12-14	(61.50%)	Nasdaq	43.40%
Hyperion Therapeutics	$50m	$10.00	$11-13	(16.70%)	Nasdaq	12.80%
ChemoCentryx	$45m	$10.00	$14-16	(33.30%)	Nasdaq	9.40%
Regulus Therapeutics	$45m	$4.00	$10-12	(63.60%)	Nasdaq	57.50%
Adocia	€ 25.3m ($33.6m)	€ 15.88	€ 13.00 - 15.88	10.00%	NYSE Euronext Paris	(37.03%)
Nanobiotix	€ 14.2m ($18.1m)	€ 6.00	€ 5.04 - 6.16	7.14%	NYSE Euronext Paris	11.67%
Clinigen	£10m ($16.2m)	164p	NA	NA	AIM	30.49%
Average across US IPOs (12 in total)				*(23.50%)*		*29.18%*
Average across all 16 IPOs				*(17.95%)*		*21.74%*

DEBT RISES AS VC FUNDING FALLS

The exuberance among public investors could also be seen in the financing data from last year, which saw numerous US biotechs raising substantial cash piles. BioMarin's huge $249m cash call topped the tables, with investors clearly believing in the company's rare disease strategy. However, once again this ebullience was largely a US story – no European company featured in the top-10 list.

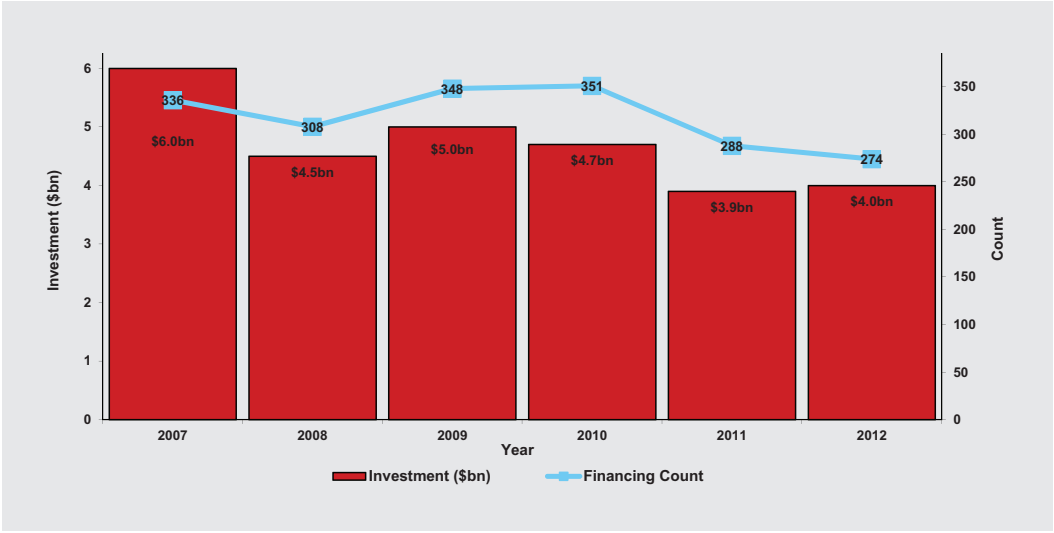
Top 5 Debt Issues and Equity Financings of 2012

Debt Issues		Equity Financings	
Company	**Amount Raised ($bn)**	**Company**	**Amount Raised ($m)**
AbbVie	14.7	BioMarin	249
Watson Pharmaceuticals	3.9	Amylin	203
Teva	3.2	Vivus	203
Merck	2.5	Idenix Pharmaceuticals	191
Bristol-Myers Squibb	2.0	Infinity	173

Cash was also raised through substantial debt offerings – the top 10 fundraisings across the sector last year were all debt. This trend that could well continue as interest rates remain low across the globe, making this a relatively cheap source of capital – for the right sorts of companies, of course.

Meanwhile, the picture was less rosy for human therapeutics developers in the private sphere. Although reports looking at the venture capital industry as a whole did reveal an uptick in activity last year, data gathered by *EvaluatePharma* showed that capital was still proving hard to come by for drug developers.

Annual VC Investments



These companies raised $4bn in venture funds in 2012 – a marginal improvement on $3.9bn the previous year but still way below pre-banking crisis levels. The number of transactions fell to the lowest level seen for at least the last six years, to 274.

Quarterly data revealed a glimmer of hope – the final three months of the year saw $1.4bn raised, the best quarter since Q4 2009.

Looking more closely at the data, it was clear that the trend for larger rounds continued, with companies and their backers seeking to form stronger syndicates with the necessary funds to get a product or company to a value inflection point. This was highlighted by a number of substantial rounds, led by the biggest raising of the year, Intarcia Therapeutics' $160m.

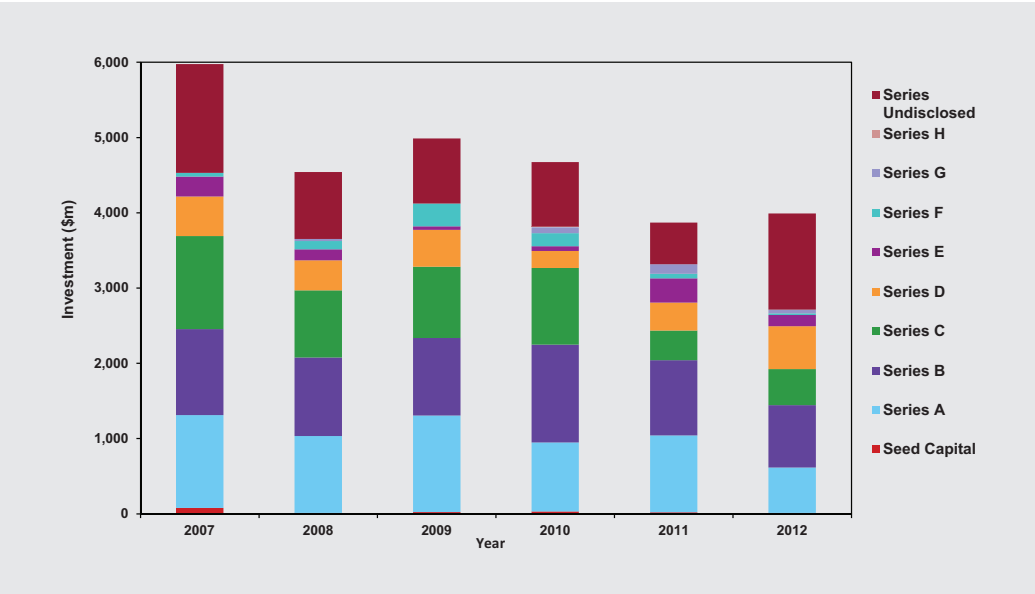
Biggest Rounds of 2012

Company	Financing Round	Investment ($m)
Intarcia Therapeutics	Series Undisclosed	160.0
CureVac	Series D	99.2
Relypsa	Series C	80.0
Ultragenyx Pharmaceutical	Series B	75.0
Rib-X Pharmaceuticals	Series B	67.5

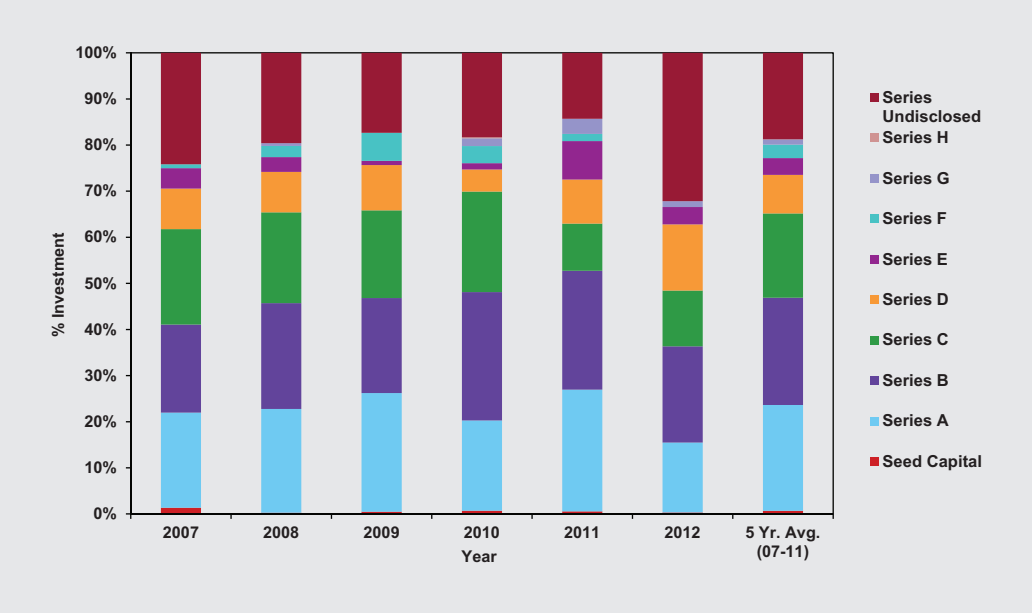
This round – its series was not disclosed – was struck alongside a $50m debt placement, and reflected the growing trend of transactions failing to follow the traditional escalator model of venture financing; 32% of all funds raised last year went to undisclosed rounds, up from 14% in 2011 and from a five-year average of 19%.

It is clear that there is money out there for early-stage, high-risk ventures. But, despite the marginal uplift on amounts raised last year and the encouraging uptick in the final quarter, it is much too soon to declare an end to the drought as the industry grapples with innovative and macroeconomic worries that have suppressed enthusiasm for human therapeutics. But should the next couple of quarters impress, the future of early-stage funding will start to look more secure.

Venture Capital Investment By Round



Venture Capital % Investment By Round

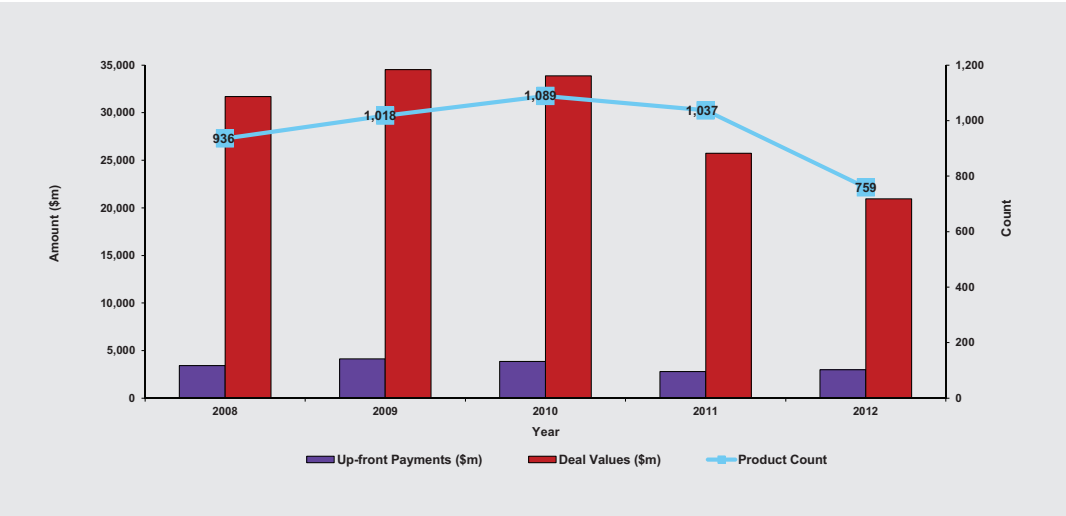


LICENSING LEVELS DECLINE

Licensing deal activity failed to elicit similarly encouraging signals. This would normally be seen as a disconcerting finding given that licensing typically makes up a major source of funds for small drug developers, and the fall-off in the number of deals, particularly in the second half of the year, could thus be seen as a disappointing sign for a sector keen to tap all sources of revenue.

After the good times – at least in deal-making terms – of 2010, when pharma companies competed with one another to fill pipelines at threat from the patent cliff, the amount of money spent licensing products declined steadily, with 2012 showing a 19% decline to $20.9bn compared with 2011, itself a lacklustre year.

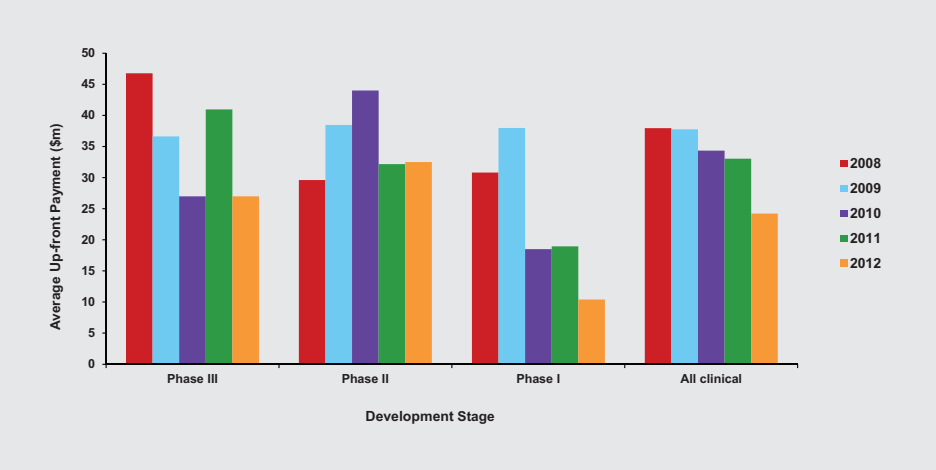
Deal Values vs. Count



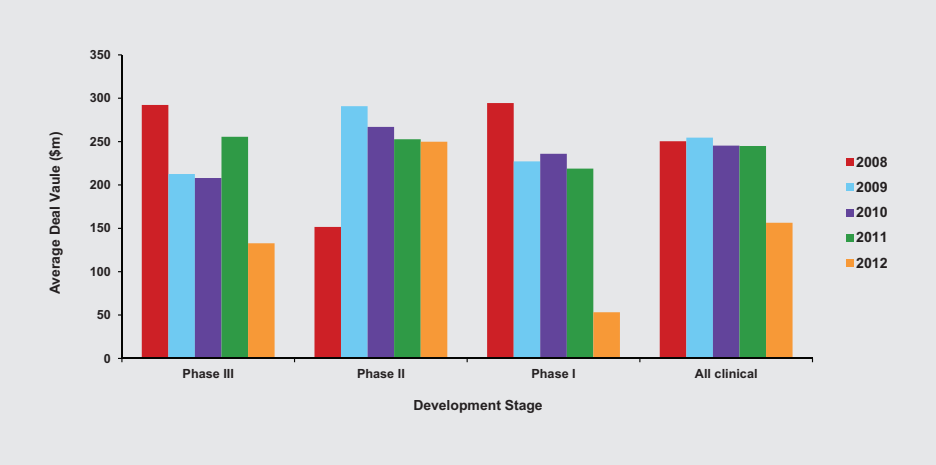
The decline in the number of products changing hands was even more marked at just 759, compared with 1,037 in 2011 and a five-year average of 968. Still, concern here might be misplaced: a major reason why fewer deals were signed must be the fact that investor enthusiasm has made many of the assets unaffordable. Thanks to this, many companies that would normally rely on cash from deals managed instead to raise it from shareholders.

Phase I deals declined considerably, both in total value and up-fronts paid, as well as the number of transactions. Meanwhile, products already filed for approval or already marketed became more attractive, the data showed, as pharma's flight to safety continued.

Average Up-front Payment ($m) per Development Stage

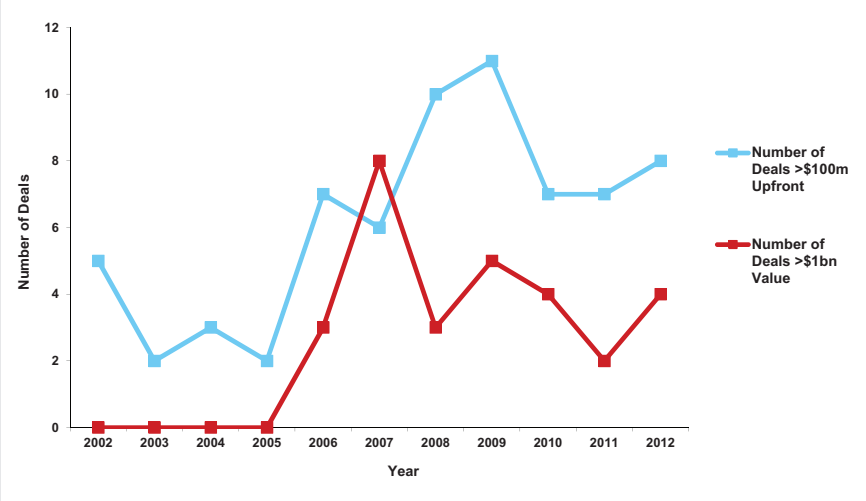


Average Deal Value ($m) per Development Stage



A look at average deal values – calculated using only those transactions with disclosed terms – showed that clinical-stage assets attracted lower up-fronts and total deal values last year. This could well presage the start of a much-needed reality check in the number of deals structured around high future milestone payments, and a realisation that the huge bio-dollars attached to a deal are rarely realised.

Mega Licensing Deals of the Last Decade



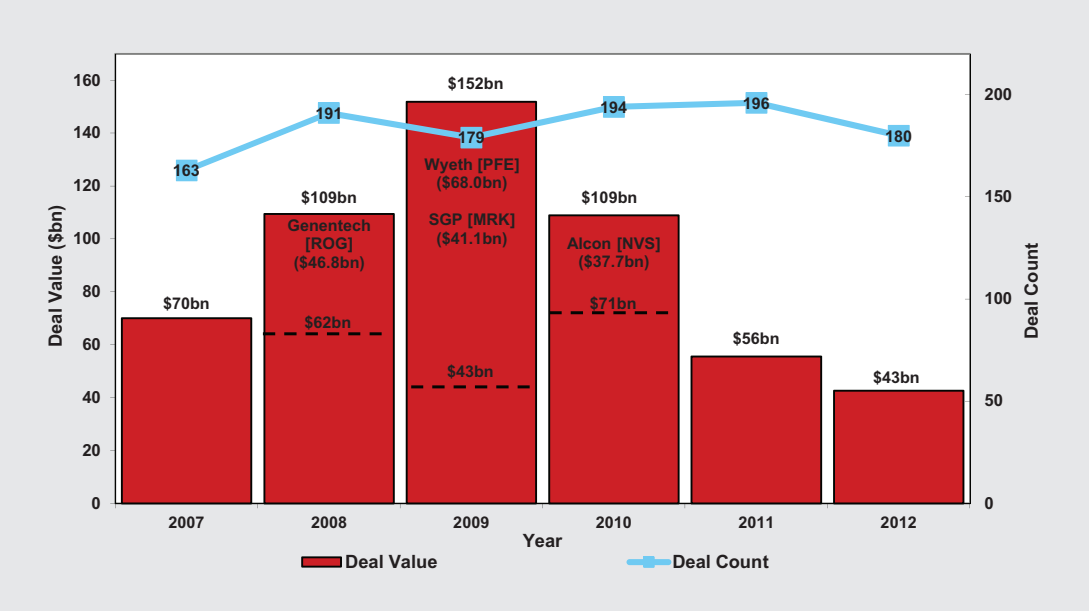
Even if this is happening across the board, the industry can still find time for a big bucks deal. An analysis showed that while transactions with an up-front element greater than $100m might have become slightly rarer in the last couple of years, the billion bio-dollar deals are alive and well.

These of course represent the exception rather than the rule. And with activity levels seemingly subdued, if this trend continues into the coming year smaller companies could find another revenue source becoming harder to tap.

MERGERS OFF THE MENU

Data on M&A transactions followed this trend, with both the number of deals struck and their total value shrinking considerably last year.

Pharma and Biotech M&A Activity



The industry spent $42.6bn last year over 180 transactions – the lowest level since 2009 if the mega mergers in that year are excluded.

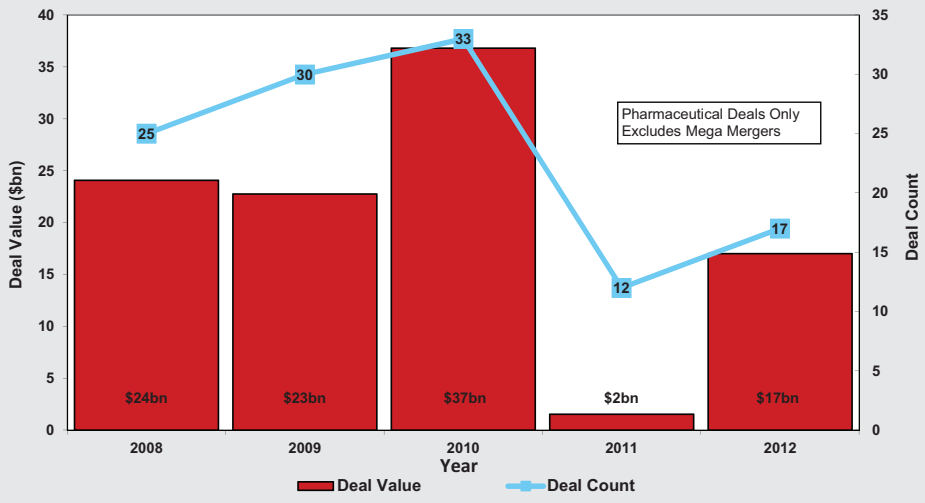
Multi-billion dollar deals were scarce – topping the tables was Bristol-Myers Squibb/ AstraZeneca's joint acquisition of Amylin for $7bn. This was a small fry compared with some of the deals of the last couple of years and the first time since 2000 that not a single pharma deal exceeded the $10bn mark.

Top 5 Pharma/Biotech M&A Deals in 2012 and 2011

Year	Rank	Acquiring Company	Target Company or Business Unit	M&A Deal Status	Deal Value ($bn)
2012	1	Bristol-Myers Squibb	Amylin Pharmaceuticals	Closed	7.0
	2	Watson Pharmaceuticals	Actavis	Closed	5.9
	3	GlaxoSmithKline	Human Genome Sciences	Closed	3.0
	4	Dainippon Sumitomo Pharma	Boston Biomedical	Closed	2.6
	5	Valeant Pharmaceuticals International	Medicis Pharmaceutical	Closed	2.6
2011	1	Takeda	Nycomed	Closed	13.1
	2	Gilead Sciences	Pharmasset	Closed	11.2
	3	Teva Pharmaceutical Industries	Cephalon	Closed	6.8
	4	Teva Pharmaceutical Industries	Taiyo Pharmaceutical Industry	Closed	1.4
	5	Forest Laboratories	Clinical Data	Closed	1.3

Big pharma was once again largely absent from the game, although admittedly it showed more interest in M&A than in the moribund 2011. With several companies trying to rationalise their business models, a trend that has so far seen the Pfizer spinout of animal health and the break-up of Abbott, these big spenders might not be focused on M&A this year either.

Big Pharma M&A Activity

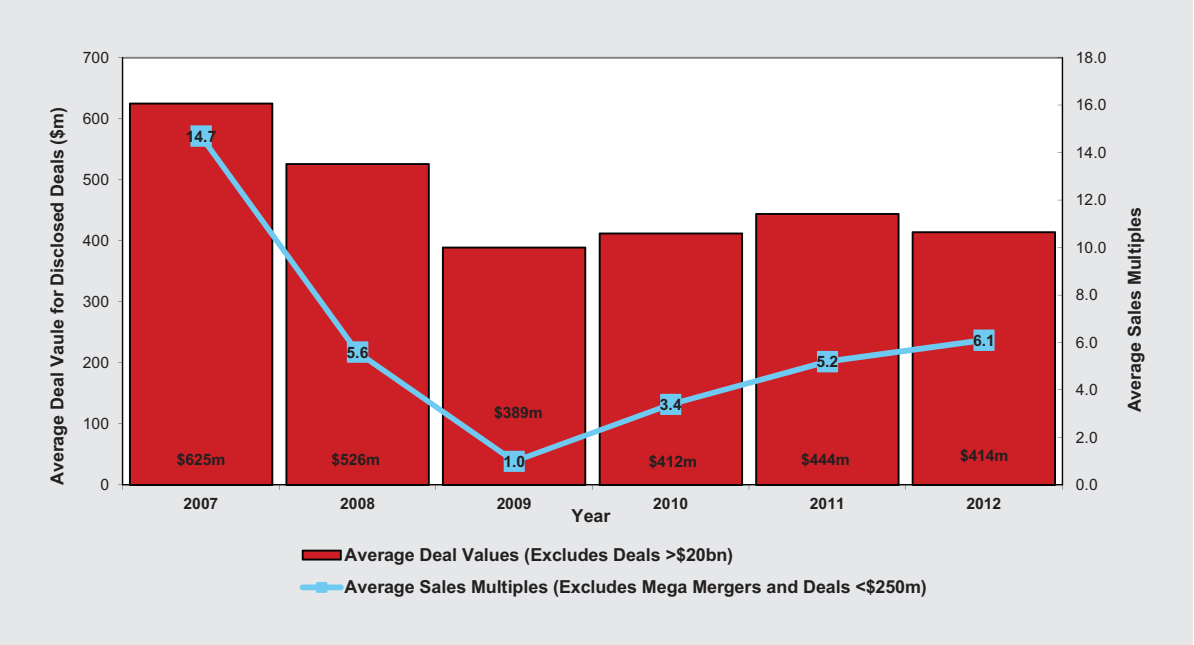


In an attempt to gauge underlying activity *EP Vantage* calculated average deal values, using transactions under $20bn; this also revealed a subdued level of activity. However, a look at sales multiples in deals worth more than $250m did reveal a glimmer of hope, with an uplift again suggesting that bets are being placed on more speculative development-stage companies.

From a trough of an average 1x sales paid in 2009, when caution was the watchword, the number has steadily recovered, to reach 6.1x last year. As an indicator, the average sales multiple shed little light on the metrics behind each deal and is no doubt a blunt analysis tool. But it does paint a picture of a sector gradually willing to take on more risk – a trend no doubt linked to the boom in biotech valuations and buoyant fundraising climate in the US.

The perfect storm of a cratered economy and 2012 patent crisis has eased to some degree, making a gamble on higher-risk ventures more attractive and diminishing the need to buy in an immediate revenue stream. But given the sluggish state of economic growth in the world's advanced economies and ongoing worries about the return on R&D investment, it is debatable whether multiples will return to their heady pre-crash heights. Many would argue that, for the sake of the sustainability of the sector, it is important that they do not.

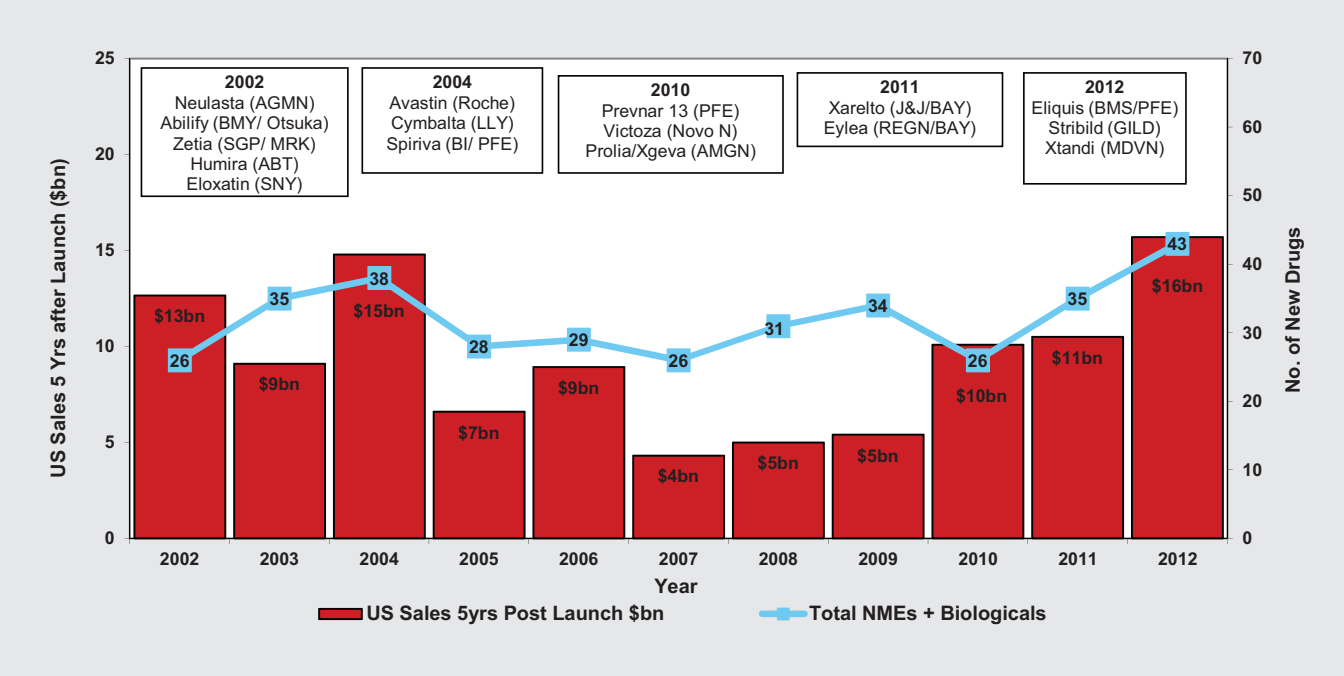
Average Deal Values and Sales Multiples



Nothing like Gilead's $11bn swoop on Pharmasset at the tail end of 2011 emerged in 2012, so 2013 could well follow as a muted year for multiples. But with biotech valuations sky high, it is clear that any acquirer will have to be prepared to pay top dollar to access many of the drug developers that investors have become so excited about.

While big pharma continued to grapple with issues of R&D productivity, encouraging signs of pipeline progress did emerge last year with a surge in FDA approval rates, a widely used metric on the industry's scorecard. The US regulator approved 43 novel biologic or small-molecule agents in 2012, up from 35 in 2011 and 26 in 2010.

FDA Approval Count vs. Total USA Product Sales 5 Years After Launch



EP Vantage analysis also revealed that the value of the novel agents reaching the market also grew. Using *EvaluatePharma* forecasts to calculate US sales five years after approval, it can be seen that last year's cohort of medicines was the most valuable to reach the market in the last decade.

In fact the last three years has seen the five-year value of newly approved products exceed the 10-year average – encouraging news for an industry that still needs to convince investors that it can turn R&D investments into sales.

Last year also saw the passing of PDUFA V, adopting some specific procedures aimed at reducing first-cycle rejections and multiple application cycles. With the pressure both on companies and the FDA to keep innovative medicines moving onto the market, 2013 has much to live up to in terms of approval rates.

2013 HOPES

Looking forward, 2013 does indeed hold approval decisions for some potentially big future medicines. Most notable is the decision on the biggest approval of the year, Biogen Idec's MS pill BG-12 or Tecfidera, due at the end of March.

Top 5 Biggest Expected Product Launches in 2013

						WW Annual Sales ($m)	
Biotechnology	**Rank**	**Product**	**Pharmacological Class**	**Company**	**Status**	**2013**	**2018**
	1	Kadcyla	Anti-HER2 (ErbB-2) MAb-DM1 maytansinoid conjugate	Roche	Approved	72	1,645
	2	Heplisav	Hepatitis B vaccine	Dynavax/Undisclosed Partner Sales	Filed	21	592
	3	GALNS	N-acetyl-galactosidase-6-sulfatase	BioMarin Pharmaceutical	Phase III	7	490
	4	Albiglutide	Glucagon-like peptide 1 (GLP-1) agonist	GlaxoSmithKline	Filed	4	352
	5	Lemtrada	Anti-CD52 MAb	Sanofi	Filed	69	347
Conventional	1	Tecfidera	Nuclear factor erythroid 2-related factor (Nrf2) pathway activator	Biogen Idec	Filed	326	3,745
	2	Breo Ellipta	Beta 2 adrenoreceptor agonist & corticosteroid	GlaxoSmithKline	Filed	37	1,436
	3	Dolutegravir	HIV integrase inhibitor	GlaxoSmithKline	Filed	45	1,320
	4	Radium-223 Dichloride	Radiotherapy agent	Bayer	Filed	71	1,002
	5	Abilify Depot	5-HT1A (serotonin) & dopamine D2 partial agonist & 5-HT2 (serotonin) antagonist	Otsuka Holdings	Filed	43	920

A couple of months in and the biggest biotech approval of the year is already in the bag, with Roche receiving a green light for antibody drug conjugate T-DM1, now called Kadcyla. With no other commercially significant biologic likely to gain approval this year, 2013 could be the year of the small molecule, if the regulatory pathways of the likes of Tecfidera and ViiV's dolutegravir progress to plan.

Echoing the strong FDA approval rate last year, an analysis of how 2012's biggest projected launches fared also reveals a strong performance. Eighteen of the 20 biggest drug launches expected to happen last year achieved lift-off, a success rate unsurpassed since *EP Vantage* started tracking the fate of blockbuster prospects.

Roche's breast cancer therapy Perjeta, ThromboGenic's eye treatment Jetrea, Amarin's heart drug Vascepa and Pfizer's RA pill Xeljanz all reached the market in 2012. It is sobering to note, however, that many have since seen substantial sales forecast downgrades.

Progress of Biggest Projected Product Launches of 2012

Biotechnology	Rank	Product	Pharmacological Class	Company	Status 2012	Current Status	2016 Sales Consensus in Jan 2012 ($m)	Current 2016 Sales Consensus ($m)	Change
	1	Ryzodeg/Tresiba	Insulin	Novo Nordisk	Filed	Approved	1,437	861	(40%)
	2	Perjeta	Anti-HER2 (ErbB-2) MAb	Roche	Filed	Marketed	1,073	1,859	73%
	3	Bexsero	Meningococcal B vaccine	Novartis	Filed	Approved	997	675	(32%)
	4	Jetrea	Plasmin	ThromboGenics	Filed	Marketed	409	224*	(45%)
	5	Menhibrix (HibMenCY-TT)	Hib & meningococcal C & Y vaccine	GlaxoSmithKline	Filed	Approved	359	285	(21%)
Total biotech products							*4,275*	*3,680*	*(9%)*
Conventional	1	Vascepa	Omega-3 fatty acid	Amarin/Undisclosed Partner Sales	Filed	Approved	2,042	845	(59%)
	2	Tecfidera	Fumarate	Biogen Idec	Phase III	Filed	1,742	2,563	47%
	3	Xeljanz	Janus kinase-3 (JAK-3) inhibitor	Pfizer	Filed	Marketed	1,430	1,864	30%
	4	Qsymia	Adrenoreceptor agonist & anti-convulsant	VIVUS	Filed	Marketed	1,134	477	(58%)
	5	Kalydeco	CFTR potentiator	Vertex Pharmaceuticals	Filed	Marketed	982	1,119	14%
Total conventional products							*7,330*	*6,868*	*(6%)*

*change in forecast reflects Thrombogenics licensing ex-US rights to Novartis

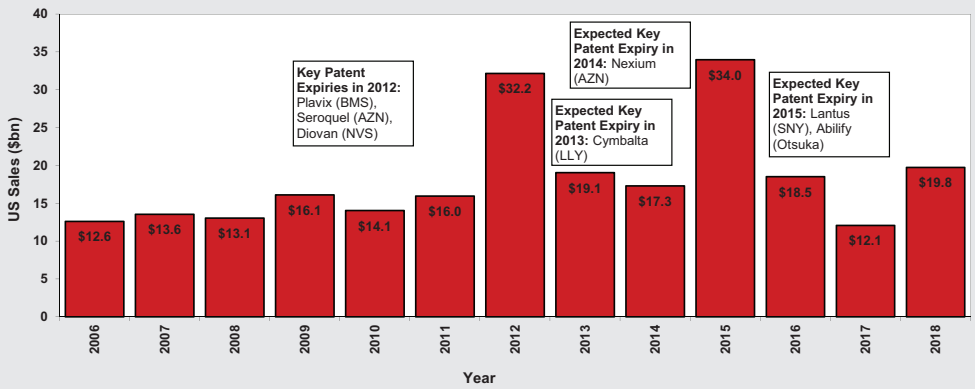
Meanwhile, the dreaded patent cliff, driver of so many deals and restructurings over the past few years, came and went in 2012. Branded drugs with annual sales of a total of $32.2bn in 2011 lost patent protection last year, leaving those revenues exposed to cheap generics, according to *EvaluatePharma* data. Seven drugs with annual US sales of more than $2bn became exposed, with Plavix, Seroquel and Singulair three big fallen giants.

Much of the slowdown being seen in M&A and licensing data is the result of dimming activity after the feeding frenzy that took place pre-patent cliff, when the pharma industry aggressively moved to fill thin pipelines and shore up revenues.

This year is set to be more benign in terms of patent expiries, with only $19.1bn of sales at risk of generic competition. Many of the big products, however, are biologics, so this figure is likely to overstate the situation somewhat. Even losses among small molecules are less profound, with Cymbalta and OxyContin the only $2bn-plus agents set to face erosion.

However, with loss of protection for the likes of Lantus, Abilify and Gleevec approaching in 2015, another painful year is close at hand for many in the industry.

US Sales At Risk from Patent Expiry 2006-18



LOOKING TO THE FUTURE

The drive to rebuild pipelines via partnering and acquisition might have lessened, but patent expiries are a fact of life in the pharma industry and pressure from this direction will only ratchet up again once regulatory pathways for biosimilars become established. With huge pricing pressure on healthcare systems across the world, the political will to encourage competition in the lucrative biotechnology space will surely only act to hasten the arrival of cheaper biotech products.

Progress in bringing these biosimilars to market is likely to be slow in the meantime, however, and it seems unlikely that 2013 will hold much revolution in the biosimilar regulatory space. Instead companies will be watching to see whether the strong recovery in 2012 results in more optimism this year or simply provides further proof of biotech's propensity for boom and bust.

EDITORIAL TEAM

Lisa Urquhart
Editor
LisaU@epvantage.com
@LisaEPVantage

Amy Brown
Senior Reporter
AmyB@epvantage.com
@AmyEPVantage

Jonathan Gardner
Reporter
JonathanG@epvantage.com
@JonEPVantage

Jacob Plieth
Senior Editorial Analyst
JacobP@epvantage.com
@JacobEPVantage

Elizabeth Cairns
Reporter
ElizabethC@epvantage.com
@LizEPVantage

Joanne Fagg
Editorial Assistant
JoanneF@epvantage.com
@JoEPVantage

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FOR GENERAL QUESTIONS ON THIS REPORT, CONTACT

Christine Lindgren
Vice President, Marketing
ChristineL@evaluatepharma.com
+1 617 573 9458

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EvaluatePharma®

Evaluate – Headquarters – Evaluate Ltd., 11-29 Fashion Street, London E1 6PX United Kingdom
Tel: +44 (0)20 7377 0800 – Fax: +44 (0)20 7539 1801

Evaluate – North America – EvaluatePharma USA, Inc., 15 Broad Street, Suite 401, Boston, MA 02109 USA
Tel: 1-617 573-9450 – Fax: 1-617 573-9542

Evaluate – Japan – EvaluatePharma Japan KK, Tokyo, Japan
Tel: +81 (0) 80 1164 4754

www.evaluatepharma.com

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