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7 December 2017

BUY
Unchanged

巩固肝病龙头地位

SINO BIOPHARMACEUTICAL LIMITED (1177:HK)

Market Data: December, 6

Closing Price (HK$)	10.22
Price Target (HK$)	12.60
HSCEI	11,163
HSCCI	4,211
52-week High/Low (HK$)	11.86/5.23
Market Cap (US$m)	9,696
Market Cap (HK$m)	75,753
Shares Outstanding (m)	7,412
Exchange Rate (Rmb-HK$)	1.18

Price Performance Chart:

Source: Bloomberg

Financial summary and valuation

	2015	2016	2017E	2018E	2019E
Revenue (HK$m)	14,550.23	15,825.44	17,309.21	20,062.96	23,216.21
YoY (%)	17.55	8.76	9.38	15.91	15.72
Net income (HK$m)	1,778.69	1,913.28	2,354.62	2,830.06	3,367.62
YoY (%)	17.54	7.57	23.07	20.19	18.99
EPS (HK$)	0.24	0.26	0.32	0.38	0.45
Diluted EPS (HK$)	0.24	0.26	0.32	0.38	0.45
ROE (%)	24.76	23.00	24.08	24.09	23.88
Debt/asset (%)	36.64	41.88	36.51	31.85	27.49
Dividend Yield (%)	0.62	0.59	0.75	0.90	1.07
PE (x)	42.58	39.60	32.17	26.77	22.49
PB (x)	5.13	6.35	5.38	4.57	3.87
EV/Ebitda (x)	22.22	19.97	17.97	14.50	12.08

Note: Diluted EPS is calculated as if all outstanding convertible securities, such as convertible preferred shares, convertible debentures, stock options and warrants, were exercised.

恩替卡韦将继续主导核苷类抗病毒药品市场。市场担心恩替卡韦将会被替诺福韦二吡呋酯替代，二者均被权威指南推荐为慢性乙肝的一线治疗用药。我们认为，替诺福韦二吡呋酯相对于恩替卡韦不具备压倒性优势，该药可以用于孕妇，但是长期应用易导致肾损伤。因此，我们认为，未来恩替卡韦将继续主导核苷类抗病毒药物市场，而替诺福韦二吡呋酯的市场份额（按量计算）或将在未来 5-7 年达到约 30%，主要用于对拉米夫定、阿德福韦、替比夫定耐药患者的挽救治疗。

润众已经度过最坏时机。由于绝大部分省份已经完成招标，我们认为未来两年，润众的降价幅度将较为有限。市场担心江苏省执行新标将会对润众的销售产生负面影响。实际上，江苏仅占润众全国销售额约 10%。因此，我们预计润众 18 年均价下降 5-10%，销量增长 15-20%，从而带来约 10%的销售额增长。我们相信未来润众和天丁将会进一步替代原研药博路定，因为他们相对于原研药有约 50%的价格折扣。此外，我们注意到润众于 17 年 3 月开始一致性评价工作，是全国最早开展该工作的恩替卡韦仿制药。因此，未来润众有望在一致性评价拔得头筹，进一步抢占其他仿制药的份额。

晴众成为第一个获批一致性评价的仿制药。12 月 5 日，公司宣布替诺福韦二吡呋酯片，商品名晴众，韦瑞德的仿制药，获得 CFDA 批准用于慢性乙肝的治疗。尽管晴众是国内第五个替诺福韦二吡呋酯仿制药（乙肝适应症排名第三），我们注意到晴众完成了与原研药头对头对照的临床试验，成为第一个通过一致性评价的替诺福韦二吡呋酯。我们将晴众峰值销售额的预测从 16 亿元提升至 22 亿元，预计公司将会占据国内替诺福韦二吡呋酯市场 40%的市场份额。这得益于公司率先通过一致性评价，并且拥有强大的肝病销售网络。

维持买入评级。由于我们对于润众、晴众、艾速平以及其他新品种的预期更加乐观，我们将 17 年稀释每股盈利从 0.31 港币上调至 0.32 港币（同比增长 23%），将 18 年的预测从 0.36 港币上调至 0.38 港币（同比增长 20%），将 19 年的预测从 0.42 港币上调至 0.45 港币（同比增长 19%）。我们维持 12.6 元目标价不变，对应 33 倍 18 年市盈率，以及 23%的上涨空间。

Analyst

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Related Reports

"Strong beat"–SBP INC(1177:HK)" November 10 2017

"Promising pipeline"–SBP INC(1177:HK)" November 6 2017

Investment Highlights:

Sino Biopharmaceutical received approval for its *Viread* generic, further strengthening its leadership in hepatitis market. Given our enhanced confidence on sales of *Runzhong, Qingzhong, Aisuping* and other new products, we lift our diluted EPS forecasts from HK$0.31 to HK$0.32 in 17E (+23% YoY), from HK$0.36 to HK$0.38 in 18E (+20% YoY) and from HK$0.42 to HK$0.45 in 19E (+19% YoY). We maintain our target price of HK$12.6, at 33x 18E PE and, with 23.3% upside, our BUY rating.

Entecavir will maintain its dominant position. We note market concerns that tenofovir disoproxil fumarate, the *Viread* generic, will replace entecavir. Tenofovir disoproxil fumarate is safe as a B-grade pregnancy risk medication, but can cause renal impairment. As such, we do not think tenofovir disoproxil fumarate is overwhelmingly superior to entecavir. We forecast entecavir to maintain stable market share by volume while tenofovir disoproxil fumarate will increase its market share by volume to c.30% within the next 5-7 years as it is substituted for lamivudine, adefovir and telbivudine as rescue therapies for in cases of nucleoside analogue drug resistance.

***Runzhong* has passed the worst time.** As most regions have completed the latest round of tenders, we see limited downside to *Runzhong's* average selling price (ASP) in the future. The market worries about the execution of new tenders in Jiangsu Province. Nevertheless, Jiangsu Province only accounts for c.10% of *Runzhong's* total sales. Hence, we think the downside to *Runzhong's* ASP will be c.5-10% in 18E. With 15-20% YoY volume growth in 18E, we forecast sales of *Runzhong* to recover to 10% YoY in 18E. We believe *Runzhong* and *Tianding* will continue to take market share from *Baraclude* thanks to significant price advantages. Furthermore, *Runzhong* started bioequivalence studies in March 2017, being the first mover in Consistency of Quality and Efficacy Evaluation for Generic Drugs (consistency evaluation). Hence, *Runzhong* may further gain market share from other generics.

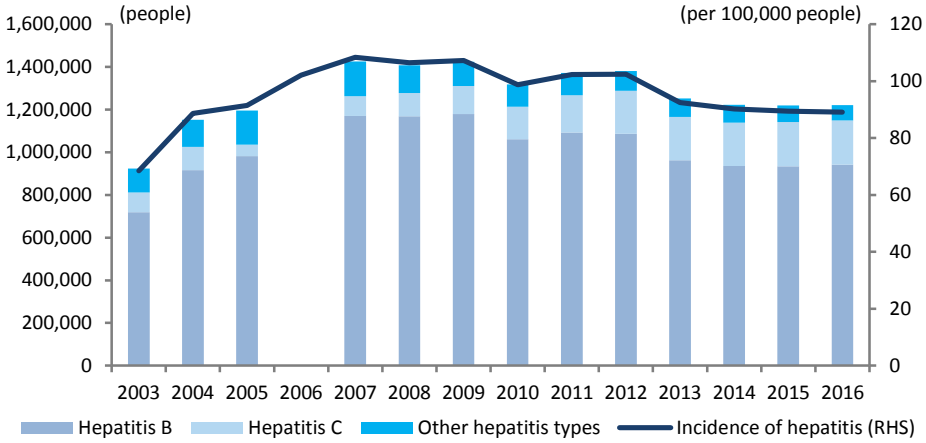
***Qingzhong* passed consistency evaluation.** On 5 December, Sino Biopharmaceutical announced that its *Viread* generic, brand name *Qingzhong*, has received approval from the China Food & Drug Administration (CFDA) for treatment of chronic hepatitis B (HBV). Although *Qingzhong* is a fifth-to-market *Viread* generic (third in terms of HBV indication), *Qingzhong* is the first *Viread* generic in China to have passed the consistency evaluation because it finished the head-to-head control clinical trial comparison with the original drug. We lift our forecast of *Qingzhong's* peak sales from Rmb1.6bn to Rmb2.2bn. We are confident that Sino Biopharmaceutical will take a 40% share of the Chinese tenofovir disoproxil fumarate market because it is the first generic to have passed consistency evaluation and due to the company's strong sales capability.

Maintain BUY. Given our enhanced confidence on sales of *Runzhong, Qingzhong, Aisuping* and other new products, we lift our diluted EPS forecasts from HK$0.31 to HK$0.32 in 17E (+23% YoY), from HK$0.36 to HK$0.38 in 18E (+20% YoY) and from HK$0.42 to HK$0.45 in 19E (+19% YoY). In renminbi terms, we forecast the company's net profit to reach Rmb2.0bn in 17E (+22% YoY), Rmb2.4bn in 18E (+18% YoY) and Rmb2.9bn in 19E (+19% YoY). We maintain our target price of HK$12.6, at 33x 18E PE and, with 23.3% upside, we maintain our BUY rating.

Competitive landscape for hepatitis market

China has a large population of viral hepatitis patients. According to data from the Chinese Center for Disease Control and Prevention (CDC), in 2016, there were 1.22m new cases of viral hepatitis, representing a high incidence rate at 89.1 per 100,000 population. Of these, 77% are infected with hepatitis B.

Fig 1: New virus hepatitis infection cases (2003-2016)



Source: China's Disease Control and Prevention Center, SWS Research

According to National Health and Family Planning Commission (NHFPC), as of 2015, there are approximately 90m hepatitis B virus (HBV) carriers in China and 28m are chronic sufferers. As most Chinese hepatitis patients are from rural areas, only a small proportion can afford the cost of antiviral treatments. According to CDC, as of 2015, only 10% of hepatitis B patients received antiviral treatments. With rising awareness of hepatitis and expanding reimbursement coverage of antiviral drugs, the treatment rate of hepatitis will increase, in our view.

Hepatitis drugs include antiviral drugs, such as nucleoside analogues (NAs) and interferon alpha, and adjuvant drugs for liver protection or immunity enhancement. In terms of sample hospital sales, NAs' share of the total market for hepatitis drug market increased from 32% in 2012 to 38% in 1H17.

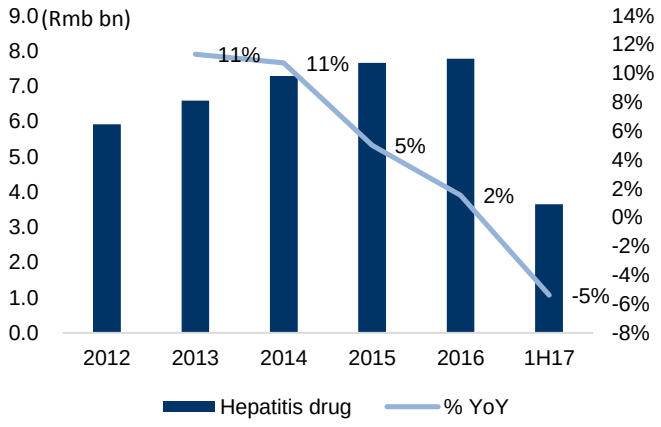
NAs usually have good tolerance, potent antiviral effects and convenient for administration (oral formulation). However, interferon alpha has severe side effects and requires subcutaneous injection. The main advantages of interferon alpha are the absence of resistance and higher rate of HBe seroconversion. Interferon is losing market share in hepatitis market (13% in 2012 vs 6% in 1H17).

Adjuvant drugs for liver protection had 56% market share in hepatitis market in 1H17, increased from 54% in 2016. We think this was mainly because NAs and interferons recently experienced large price cuts and lost market share to adjuvant drugs. However, we think the trend will reverse from 18E because the tenders have been largely completed and increasing proportion of hepatitis patients will receive anti-viral treatment.

We estimate that China's hepatitis market amounted to c.Rmb40bn in 2016. According to sales in sample hospitals, hepatitis drugs grew at a 6% Cagr in 2013-16. Nevertheless, hepatitis drug sales declined by 5% YoY in 1H17 because of large price cuts for NAs and interferons. We forecast 3-5% growth Cagr in Chinese hepatitis drug market in the next 3 years. We think NAs will gain market share

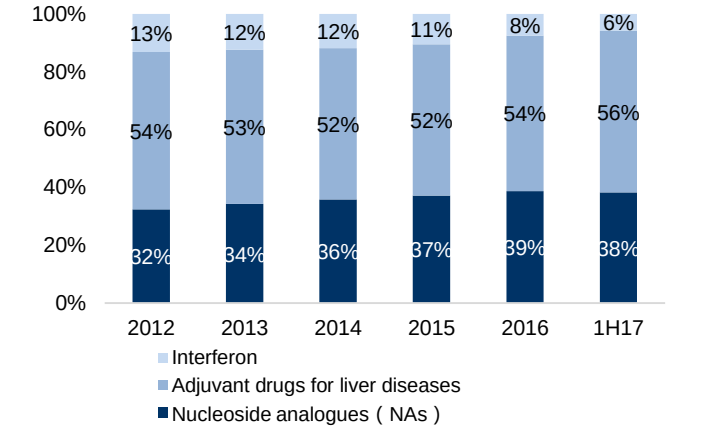
from adjuvant drugs because NAs have potent anti-viral efficacy while adjuvant drugs don't. We expect 5-8% Cagr for Chinese NA market in the next three years.

Fig 2: Growth in hepatitis drug sales in sample hospitals (2012-1H17)



Source: Pharma Database, SWS Research

Fig 3: Market share split of hepatitis drugs in sample hospitals (2012-1H17)



Source: Pharma Database, SWS Research

Entecavir will maintain its dominant position

There are five main NA drugs in the market, including lamivudine (LAM), adefovir (ADV), entecavir (ETV), telbivudine (LdT) and tenofovir disoproxil fumarate (TDF). Entecavir and tenofovir disoproxil fumarate are recommended by authoritative guidelines as first line monotherapies for hepatitis B.

Fig 4: Key factors of NA drugs

Generic name	Original producer	Brand name	Year of US FDA approval	Year of CFDA approval	Advantages	Disadvantages
Tenofovir disoproxil fumarate (TDF)	Gilead	Viread	Approved by US FDA for the treatment of HIV in 2001; Approved by US FDA for the treatment of HBV in 2008	Approved by CFDA for the treatment of HIV in 2011; Approved by CFDA for the treatment of HBV in 2013	Potent HBV inhibitors; Highest barrier to resistance; No cross resistance; Safe for B grade pregnant women	Expensive costs; Renal impairment
Entecavir (ETV)	BMS	Baraclude	2005	2005	Potent HBV inhibitors; High barrier to resistance	Resistance in lamivudine-refractory hepatitis; Expensive costs
Adefovir (ADV)	GSK	Hepsera	2002	2005	Cheap costs	Less efficacious than TDF; Low barrier to resistance
Lamivudine (LAM)	GSK	Heptodin	1998	2001	Cheap costs	Lowest barrier to resistance
Telbivudine (LdT)	Novartis	Sebivo	2006	2007	Potent HBV inhibitors; Safe for B grade pregnant women	Low barrier to resistance; Resistance in lamivudine-refractory hepatitis

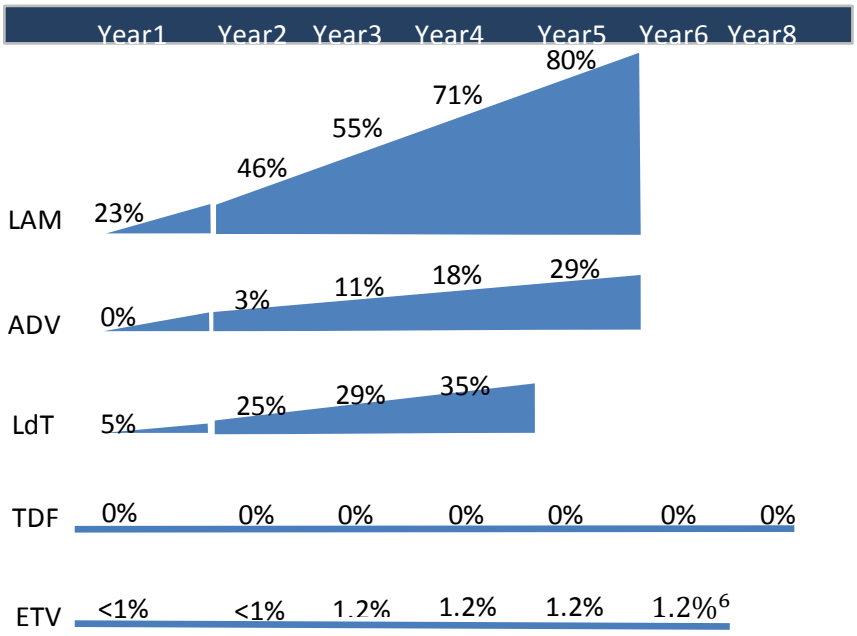
Source: European Association for the Study of the Liver, CFDA, Yaozh.com, SWS Research

Drug resistance is a serious problem for NA therapies. Lamivudine is the first approved NA drug for hepatitis B and has been most widely used to date. Lamivudine is an inexpensive agent, but engenders very high rates of resistance with monotherapy. The cumulative rate of emergence of lamivudine resistance is 15-20% per year, and it plateaus at 60-80% after five years. Lamivudine is cross-resistant to telbivudine and entecavir. Patients resistant to lamivudine can switch to tenofovir disoproxil fumarate.

Among treatment-naive patients, entecavir resistance is very rare, only 1% over five years. Nevertheless, entecavir has much higher rates of resistance in lamivudine refractory patients, around 10% per annum. Entecavir has no cross-resistance to adefovir, so entecavir monotherapy can be used for adefovir resistant patients.

Tenofovir disoproxil fumarate has the least chance of resistance. Resistance to tenofovir disoproxil fumarate has not been described so far.

Fig 5: Cumulative incidence of antiviral resistance in long-term studies of NA therapy



Source: Asian-Pacific clinical practice guidelines on the management of hepatitis B, SWS Research

Market concerns that entecavir will be substituted by tenofovir disoproxil fumarate because tenofovir disoproxil fumarate has stronger antiviral properties and expanded reimbursement coverage.

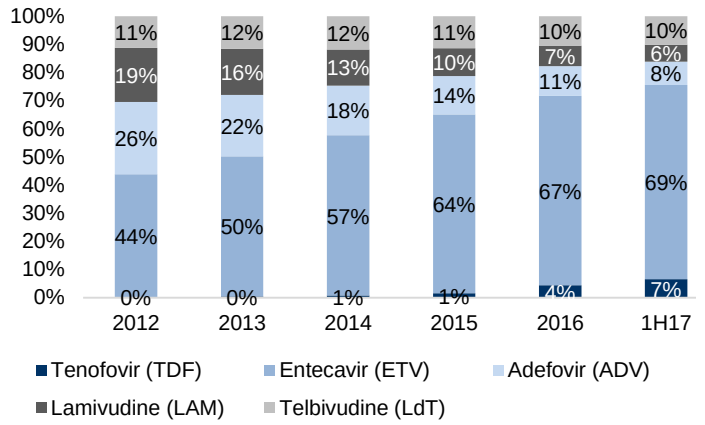
Tenofovir disoproxil fumarate is safe for B grade pregnant women. Nevertheless, renal impairment, including cases of acute renal failure and Fanconi syndrome (renal tubular injury with severe hypophosphatemia), has been reported with the use of tenofovir. As such, we don't think tenofovir disoproxil fumarate is overwhelmingly superior to entecavir.

In our view, tenofovir disoproxil fumarate will mainly take market share from patients resistant to lamivudine, adefovir or telbivudine. The combined market share of lamivudine, adefovir and telbivudine by volume was 34% in 1H17, indicating significant room for substitution by tenofovir disoproxil fumarate.

Sino Biopharmaceutical is also developing tenofovir alafenamide fumarate (TAF, a *Vemlidy* generic) which only requires 1/10 dosage of tenofovir disoproxil fumarate and causes much less side effects than TDF. *Vemlidy* was approved by the US FDA for treatment of HBV in November 2016.

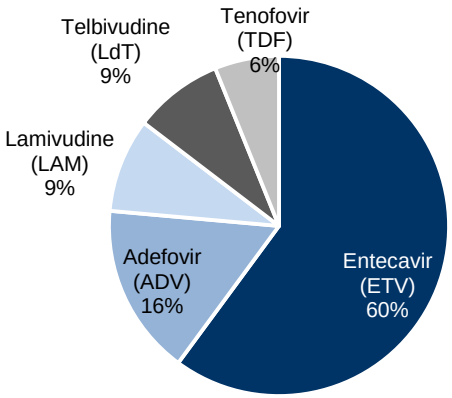
Sino Biopharmaceutial has already started the bioequivalence (BE) study for *Vemlidy* generic in November 2017. As *Vemlidy*'s Chinese patent will expire in July 2021, we expect Sino Biopharmaceutical's *Vemlidy* generic to come to the market in end-2021.

Fig 6: Market share split of NAs by revenue (2012-1H17)



Source: Pharma Database, SWS Research

Fig 7: Market share split of NAs by volume (1H17)



Source: Pharma Database, SWS Research

As of 1H17, in Chinese NA market, entecavir has 69% market share by revenue and 60% market share by volume. Tenofovir disoproxil fumarate accounts for 7% market share by revenue and 6% by volume, while the remaining 34% market share by volume is divided between lamivudine, adefovir, and telbivudine. We forecast entecavir to maintain stable market share by volume in the future while tenofovir disoproxil fumarate will increase its market share by volume to c.30% within the next 5-7 years because it will substitute lamivudine, adefovir and telbivudine as rescue therapies for NA drug resistance. In terms of global sales, *Baraclude* (entecavir) reached peak sales of US$1.53bn in 2013 and sales have since declined to US$1.19bn in 2016 while *Viread* (tenofovir disoproxil fumarate)'s sales have grown to US$1.19bn in 2016.

Viread completed price negotiations with the central government in 2015 and agreed to cut the price by a significant 67%. After the price cut, the yearly treatment cost of *Viread* is c.Rmb5,962. As of 1H17, the average selling price of *Runzhong* is Rmb4,942, which is c.17% cheaper than *Viread.* Hence, *Runzhong* has cost advantages to *Viread.*

Fig 8: Treatment costs of NAs

Generic name	Yearly treatment cost of orginal drug (Rmb)	Major generic drug producer	Generic drug brand name	Yearly treatment cost of generic drug (Rmb)	Reimbursement coverage
Tenofovir disoproxil fumarate (TDF)	5,962	Chiatai Tianqing	Qingzhong	5,232	NRDL Type2 (limited to HIV infection, active hepatitis B or interruption of mother-to-infant transmission of hepatitis B virus) 1 PRDL (Hubei, only for second-line treatment)
Entecavir (ETV)	10,428	Chiatai Tianqing	Runzhong	4,942	NRDL Type2 (limited to active hepatitis B) 27 PRDLs (limited to active hepatitis B), 2 PRDLs (no reimbursement restriction)
Adefovir (ADV)	5,581	TIPR Pharmaceutical	Daiding	3,291	NRDL Type2 (limited to active hepatitis B) 28 PRDLs (limited to active hepatitis B), 1 PRDL (no reimbursement restriction)
Lamivudine (LAM)	4,325	Cosunter Pharmaceutical	Heganding	2,414	NRDL Type2 (limited to active hepatitis B or interruption of mother-to-infant transmission of hepatitis B virus) 29 PRDLs (limited to active hepatitis B), 2 PRDLs (no reimbursement restriction)
Telbivudine (LdT)	6,782	NA	NA	NA	NRDL Type2 (limited to active hepatitis B or interruption of mother-to-infant transmission of hepatitis B virus) 30 PRDLs (limited to active hepatitis B), 1 PRDL (no reimbursement restriction)

Source: Yaozh.com, Pharma Database, SWS Research

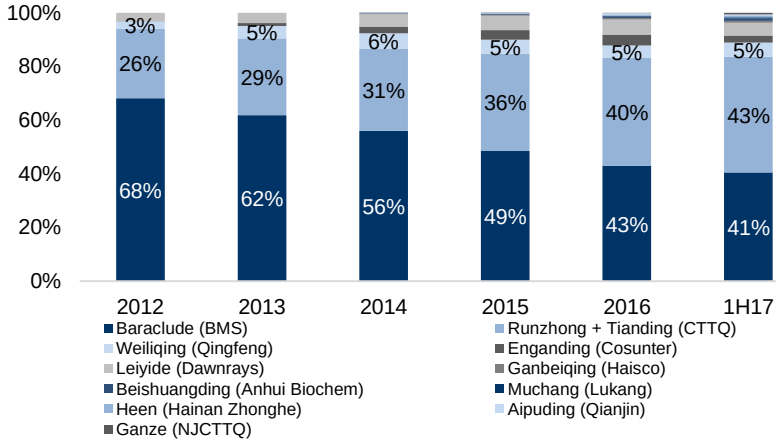
Runzhong has passed the worst time

Runzhong (entecavir dispersible tablet) is Sino Biopharmaceutical's largest source of revenue. In 9M17, sales of *Runzhong* increased 6.2% YoY to Rmb2.5bn, accounting for 22% of Sino Biopharmaceutical's total sales.

Sino Biopharmaceutical launched *Tianding* (entecavir maleate tablet) in 2012. This is a good supplement to *Runzhong*. Sales of *Tianding* was Rmb299m in 9M17, up 75% YoY. Combined sales of *Runzhong* and *Tianding* reached Rmb2.8bn in 9M17, up 11% YoY.

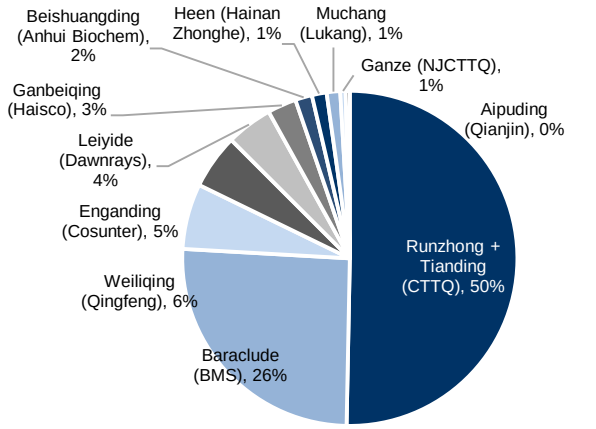
In the Chinese entecavir market, the combined market share of Sino Biopharmaceutical's *Runzhong* and *Tianding* increased rapidly, from 26% in 2012 to 43% in 1H17 by revenue, thanks to the company's strong sales team. By volume, *Runzhong* and *Tianding* have 50% market share in 1H17, the original drug, *Baraclude* accounts for 26% market share, while other generics have the remaining 24%.

Fig 9: Market share split of entecavir by revenue (2012-1H17)



Source: Pharma Database, SWS Research

Fig 10: Market share split of entecavir by volume (1H17)



Source: Pharma Database, SWS Research

We believe *Runzhong* and *Tianding* will continue to take market share from *Baraclude* thanks to significant price advantages. The average tender price of *Runzhong* represents a 53% discount to *Baraclude*, while *Tianding*'s tender price represents a discount to *Baraclude* of 42%.

Fig 11: Price comparison of entecavir

Brand name	Manufacturer	Generic name	Status	Formulation	Year of CFDA approval	Average tender price (Rmb per 0.5mg dose)	Lowest tender price nationwide (Rmb per 0.5mg dose)
Baraclude	Bristol-Myers Squibb	Entecavir	Original drug	Tablet	2005	28.57	25.10
Runzhong	Chiatai Tianqing	Entecavir	First-to-market generic	Dispersible tablet	2010	13.54	9.18
Tianding	Chiatai Tianqing	Entecavir Maleate	Generic	Tablet	2012	16.44	14.35
Leiyide	Dawnrays	Entecavir	Second-to-market generic	Dispersible tablet	2010	19.33	16.13
Weiliqing	Qingfeng Pharma	Entecavir	Third-to-market generic	Dispersible tablet	2010	15.19	10.48
Enganding	Cosunter Pharma	Entecavir	Fourth-to-market generic	Capsule	2011	8.84	6.69

Source: Pharma Database, Insight, Yaozh.com, SWS Research

Furthermore, *Runzhong* started BE study in March 2017, being the first mover in Consistency of Quality and Efficacy Evaluation for Generic Drugs (consistency evaluation). We think *Runzhong* will be the first three entecavir generics to pass

the evaluation. Hence, *Runzhong* may further gain market share from other generics.

Fig 12: BE study of entecavir generics

Company	Formulation	Kickoff time
CTTQ Pharmaceutical Group	Dispersible tablet	2017-03-09
Beijing Baiao Pharmaceutical	Common tablet	2017-04-12
Jiangxi Qingfeng Pharmaceutical	Dispersible tablet	2017-04-27
BrightGene Pharmaceutical	Common tablet	2017-06-14
Jiangxi Qingfeng Pharmaceutical	Capsule	2017-06-22
Haisco Pharmaceutical	Capsule	2017-06-22
Qianjin Pharmaceutical	Common tablet	2017-08-09
NJCTTQ Pharmaceutical	Capsule	2017-08-26
Qilu Pharmaceutical	Common tablet	2017-09-16
Zhejiang Huasheng Biopharmaceutical	Common tablet	2017-09-16
Dawnrays Pharmaceutical	Dispersible tablet	2017-09-21
Lonzeal Pharmaceutical	Capsule	2017-10-26
Anhui Biochem	Dispersible tablet	2017-10-31

Source: Insight, SWS Research

Due to c.50% price cuts in Shanxi, Zhejiang, Beijing, Hubei, etc., and the loss of tenders in Fujian and Guangdong in 2016, *Runzhong's* sales growth decelerated from 13% YoY in 2016 to 6% in 9M17. We estimate the ASP of *Runzhong* was down c.25% in 17E while the sales volume increased significantly by c.30% during the same period. *Runzhong's* ASP is currently c.Rmb13.5 per 0.5mg.

As most regions have completed the latest round of tenders, we expect limited downside in *Runzhong's* ASP in the future. The market worries about the execution of new tenders in Jiangsu Province. Nevertheless, Jiangsu Province only accounts for c.10% of *Runzhong's* total sales. Hence, we think the downside in *Runzhong's* ASP will be c.5-10% in 18E. With 15-20% volume growth in 18E, we forecast sales of *Runzhong* to recover to 10% YoY in 18E.

In the longer term, we think *Runzhong* will maintain stable pricing because it will be the first three players to pass consistency evaluation and will enjoy better competition landscape.

Fig 13: Tender prices of *Runzhong* (2010-2017)

(0.5mg*7 dispersible tablets)	2010	2011	2012	2013	2014	2015	2016	2017	% of price cut
Shanxi		172.00						77.70	-54.8%
Zhejiang	153.00					77.70			-49.2%
Beijing				146.96				77.70	-47.1%
Hubei				146.96			77.70		-47.1%
Inner Mongolia		172.73					108.00		-37.5%
Guangxi		188.00					125.88		-33.0%
Sichuan						118.23		88.00	-25.6%
Shanghai						138.00		102.95	-25.4%
Shandong				127.96			99.98		-21.9%
Yunnan		181.39						160.95	-11.3%
Hunan					153.64	140.00			-8.9%
Shaanxi			155.76					146.95	-5.7%
Heilongjiang								116.06	NA
Chongqing								79.72	NA
Kweichow								77.70	NA

Tianjin				77.70	NA
Jilin		142.10			NA
Hainan		140.00			NA
Anhui		118.00			NA
Guangdong			141.13	Tender lost	NA
Fujian		129.50		Tender lost	NA
Jiangsu	166.88			77.70	-53.4% (Tenders not executed)
Qinghai		159.80			Tenders ongoing
Hebei	166.88				Tenders ongoing

Source: Yaozh.com, SWS Research

Qingzhong passed consistency evaluation

On 5 December, Sino Biopharmaceutical announced that its *Viread* generic, brand name *Qingzhong,* has received the CFDA's approval for treatment of chronic hepatitis B.

Before Qingzhong, Fujian Cosunter Pharmaceutical (300436:CH – N-R) and Chengdu Brilliant Pharma received CFDA's approval for the HBV indication of Viread generics in May 2017. In early December 2017, the CFDA almost simultaneously approved another three *Viread* generics for treatment of HBV, including Sino Biopharmaceutical's *Qingzhong*, Qilu Pharma and Anhui Biochem. To date, five manufactures have received the CFDA's approval for *Viread* generics.

Despite that *Qingzhong* is a fifth-to-market *Viread* generic (third in terms of HBV indication), *Qingzhong* is the first *Viread* generic in China that have passed the consistency evaluation because it finished the head-to-head control clinical trial comparison with the original drug. Thus, we believe *Qingzhong* has significant advantages in tenders compared with other *Viread* generics. In addition, Sino Biopharmaceutical boasts a sizable hepatitis drug sales team (4,983 people as of June 2017), which will help to quickly ramp up *Qingzhong* sales.

Viread completed price negotiations with the central government in 2015 and agreed to cut the price by a significant 67%. After the price cut, the selling price is Rmb16.33 per 300mg. According to the latest tender results, *Qingzhong's* price in Heilongjiang Province is Rmb14.3 per 300mg, 12% below *Viread* and 1-9% cheaper than other Viread generics. As chronic HBV patients are sensitive to prices, we think *Qingzhong's* price advantages will help to drug to take market share.

Fig 14: Tenofovir disoproxil fumarate manufacturers

Brand name	Manufacturer	Status	Time of CFDA approval	Average tender price (Rmb per 300mg)
Viread	Gilead	Original drug	Approved for HIV indication in 2011; Approved for HBV indication in 2013	16.33
Beixin	Chengdu Brilliant Pharma	First-to-market generic	Approved for HIV indication in Nov 2016; Approved for HBV indication in May 2017	15.79
Fuganding	Fujian Cosunter Pharmaceutical	Second-to-market generic	Approved for HBV indication in May 2017; Approved for HIV indication in Nov 2017	15.49
NA	Qilu Pharma	Third-to-market generic	Approved for HIV indication in May 2017 Approved for HBV indication in Dec 2017	15.21
Zhengwen	Anhui Biochem	Fourth-to-market generic	Approved for HIV indication in Jun 2017 Approved for HBV indication in Dec 2017	14.52
Qingzhong	Sino Biopharmaceutical	Fifth-to-market generic	Approved for HIV indication in Oct 2017 Approved for HBV indication in Dec 2017	14.33

Source: Yaozh.com, CFDA, SWS Research

As discussed above, tenofovir disoproxil fumarate is a first-line drug used for treatment of chronic hepatitis B. Compared with other nucleoside analogue drugs,

such as lamivudine and adefovir, tenofovir disoproxil fumarate has stronger and quicker anti-virus efficacy, lower chance of drug resistance and more safety to B grade pregnant women. Nevertheless, tenofovir disoproxil fumarate can lead to renal impairment. We expect tenofovir disoproxil fumarate to substitute lamivudine, adefovir and telbivudine as rescue therapies for NA drug resistance.

The combined market share of lamivudine, adefovir, and telbivudine by volume was 34% in 1H17, indicating significant room for substitution by tenofovir disoproxil fumarate. Moreover, tenofovir disoproxil fumarate was added to the new NRDL in February 2017. To date, 27 provinces have rolled out the new NRDL, which will stimulate the market share gain for tenofovir disoproxil fumarate.

We expect tenofovir to increase its share by volume in the Chinese NA market to 30% by 2024E. We also forecast the proportion of HBV patients receiving NA therapies will climb from 12% in 18E to 20% in 24E.

Given that there will be at least five generic players on the tenofovir disoproxil fumarate market, we think the ASP of *Qingzhong* will decline at a 5% Cagr in 2018-24E. We lift our forecast of *Qingzhong's* peak sales from Rmb1.6bn to Rmb2.2bn because we are confident that Sino Biopharmaceutical will take 40% market share in Chinese tenofovir disoproxil fumarate because it is the first generic passed consistency evaluation and the company has strong sales capability.

Fig 15: Sales projection for tenofovir

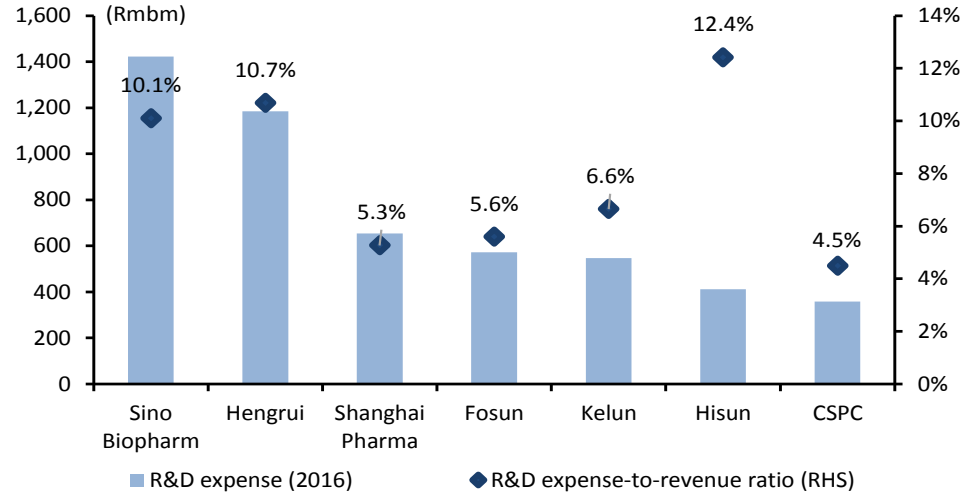
	2018E	2019E	2020E	2021E	2022E	2023E	2024E
Number of patients with chronic HBV ('000 ppl)	28,000	28,000	28,000	28,000	28,000	28,000	28,000
Patients taking NA treatment as % of total chronic HBV patients	12.00%	14.00%	16.00%	17.00%	18.00%	19.00%	20.00%
Penetration rate of tenofovir among patients receiving NA treatment	10.00%	15.00%	20.00%	23.00%	26.00%	28.00%	30.00%
SBP's market share in Chinese tenofovir market	12.00%	18.00%	23.00%	28.00%	35.00%	38.00%	40.00%
Annual treatment cost of Sino Biopharmaceutical's tenofovir generic (Rmb)	5,200	4,940	4,693	4,458	4,235	4,024	3,822
Annual net sales of tenofovir (Rmbm, after VAT)	**179**	**447**	**827**	**1,168**	**1,660**	**1,947**	**2,195**

Source: Company data, SWS Research

Long-term winner in the pharmaceutical industry

We believe Sino Biopharmaceutical will continue to expand its product portfolio thanks to its strong capability in drug innovation. Sino Biopharmaceutical also has a sizable and capable in-house sales team, which will help its new drugs to quickly ramp up after commercialisation. The company's R&D expense-to-revenue ratio has remained stable since 2011 (at c.8-10%). In absolute terms, its R&D expense is higher than most domestic competitors.

Fig 16: R&D expenses of Chinese pharmaceutical companies in 2016 (excluding capitalised expenses)



Source: Company data, SWS Research

In January 2017, the company changed its reporting currency from Hong Kong dollars to renminbi. To maintain consistency, our model remains denominated in Hong Kong dollars.

Given our enhanced confidence on sales of *Runzhong, Qingzhong, Aisuping* and other new products, we lift our diluted EPS forecasts from HK$0.31 to HK$0.32 in 17E (+23% YoY), from HK$0.36 to HK$0.38 in 18E (+20% YoY) and from HK$0.42 to HK$0.45 in 19E (+19% YoY). Translating into Rmb terms, we forecast the company's net profit to reach Rmb2.0bn in 17E (+22% YoY), Rmb2.4bn in 18E (+18% YoY) and Rmb2.9bn in 19E (+19% YoY).

The stock is trading at 27x 18E PE. We believe Sino Biopharmaceutical will become a long term winner in pharmaceutical industry because it will consistently launch new blockbusters thanks to the company's strong R&D capability and heavy investment in R&D.

We maintain our target price of HK$12.6, indicating 33x 18E PE and 23% upside.

Risks

Downside risks mainly lie in larger-than-expected price cuts of *Runzhong*, slower-than-expected rollout of new products, and corporate governance risks.

Appendix

Consolidated Income Statement

HK$m	2015	2016	2017E	2018E	2019E
Revenue	**14,550**	**15,825**	**17,309**	**20,063**	**23,216**
Cost of Sales	**(3,250)**	**(3,291)**	**(3,588)**	**(4,173)**	**(4,806)**
Gross Profit	**11,301**	**12,534**	**13,721**	**15,890**	**18,410**
Other Income	**392**	**321**	**532**	**334**	**346**
Selling/General/Admi. Expenses	(7,131)	(7,587)	(8,117)	(9,229)	(10,517)
Ebitda	3,485	3,906	4,285	5,240	6,176
Ebit	3,132	3,512	3,886	4,841	5,777
Finance Costs	(80)	(90)	(91)	(85)	(68)
Profit before tax	**3,444**	**3,743**	**4,328**	**5,089**	**6,056**
Income tax expense	(533)	(555)	(735)	(865)	(1,029)
Minority interests	(1,132)	(1,275)	(1,238)	(1,394)	(1,659)
Profit for the year	**1,779**	**1,913**	**2,355**	**2,830**	**3,368**

Source: Company data, SWS Research

Consolidated Cash Flow Statement

HK$m	2015	2016	2017E	2018E	2019E
Profit before taxation	**3,444**	**3,743**	**4,328**	**5,089**	**6,056**
Plus： Depr. and amortisation	353	394	399	399	399
Finance cost	80	90	91	85	68
Losses from investments	(195)	(159)	(136)	(160)	(160)
Change in working capital	(445)	306	(62)	(377)	(430)
Others	(946)	(922)	(1,186)	(1,336)	(1,563)
CF from operating activities	**2,291**	**3,452**	**3,433**	**3,701**	**4,369**
Capex	(1,776)	(910)	(850)	(850)	(850)
Other CF from investing activities	(57)	(1,384)	320	344	356
CF from investing activities	**(1,833)**	**(2,294)**	**(530)**	**(506)**	**(494)**
Equity financing	0	0	0	0	0
Net change in liabilities	2	1,677	(500)	(500)	(500)
Dividend and interest paid	(376)	(534)	(656)	(765)	(876)
Other CF from financing activities	(514)	(680)	(873)	(1,049)	(1,248)
CF from financing activities	**(888)**	**462**	**(2,028)**	**(2,313)**	**(2,624)**
Net cash flow	**(430)**	**1,619**	**875**	**881**	**1,251**
FCFF	731	2,747	2,637	3,148	3,866
FCFE	653	4,334	2,047	2,562	3,299

Source: Company data, SWS Research

Consolidated Balance Sheet

HK$m	2015	2016	2017E	2018E	2019E
Current Assets	9,936	14,212	15,151	16,560	18,404
Bank balances and cash	2,711	4,203	5,079	5,960	7,211
Trade and other receivables	1,866	2,228	2,229	2,583	2,989
Inventories	950	999	1,062	1,235	1,422
Other current assets	4,408	6,782	6,782	6,782	6,782
Long-term investment	1,258	999	1,265	1,552	1,889
PP&E	2,656	3,000	3,490	3,980	4,470
Intangible and other assets	2,632	2,329	2,290	2,251	2,212
Total Assets	**16,483**	**20,540**	**22,196**	**24,342**	**26,975**
Current Liabilities	5,524	6,314	6,315	6,466	6,628
Borrowings	1,420	1,529	1,529	1,529	1,529
Trade and other payables	768	923	924	1,075	1,238
Other current liabilities	3,336	3,862	3,862	3,862	3,862
Long-term liabilities	516	2,288	1,788	1,288	788
Total Liabilities	**6,040**	**8,602**	**8,103**	**7,754**	**7,416**
Minority Interests	2,687	3,053	3,419	3,764	4,174
Shareholder Equity	7,756	8,885	10,674	12,825	15,384
Share Capital	185	185	185	185	185
Reserves	7,571	8,699	10,489	12,640	15,199
Total Equity	10,443	11,938	14,093	16,589	19,559
Total Liabilities and equity	**16,483**	**20,540**	**22,196**	**24,342**	**26,975**

Source: Company data, SWS Research

Key Financial Ratios

	2015	2016	2017E	2018E	2019E
Ratios per share (HK$)					
Earnings per share	0.24	0.26	0.32	0.38	0.45
Diluted EPS	0.24	0.26	0.32	0.38	0.45
Operating CF per share	0.44	0.47	0.46	0.50	0.59
Dividend per share	0.06	0.06	0.08	0.09	0.11
Net assets per share	1.99	1.61	1.90	2.24	2.64
Key Operating Ratios (%)					
ROIC	21.88	19.46	19.43	21.67	22.88
ROE	24.76	23.00	24.08	24.09	23.88
Gross profit margin	77.67	79.20	79.27	79.20	79.30
Ebitda Margin	23.95	24.68	24.75	26.12	26.60
Ebit Margin	21.53	22.19	22.45	24.13	24.88
Growth rate of Revenue(YoY)	17.55	8.76	9.38	15.91	15.72
Growth rate of Profit(YoY)	17.54	7.57	23.07	20.19	18.99
Debt-to-asset ratio	36.64	41.88	36.51	31.85	27.49
Turnover rate of net assets	1.39	1.33	1.23	1.21	1.19
Turnover rate of total assets	0.88	0.77	0.78	0.82	0.86
Effective tax rate (%)	15.47	14.83	16.98	17.00	17.00
Dividend yield (%)	0.62	0.59	0.75	0.90	1.07
Valuation Ratios (x)					
PE	42.58	39.60	32.17	26.77	22.49
PB	5.13	6.35	5.38	4.57	3.87
EV/Sale	5.32	4.93	4.45	3.79	3.21

Source: Company data, SWS Research

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