

IVD MEDICAL HOLDING LIMITED

Initiation of Coverage

A leading IVD product distributor in China

Initiate with Buy rating; a leading IVD product distributor in China

IVD Medical conducts its IVD product distribution business mainly through two subsidiaries 1) Vastec has been the sole national distributor of Sysmex' haemostasis products since 1997 and is No.1 haemostasis distributor and No.4 IVD product distributor in China; 2) Dacheng, No.3 IVD distributor in Shanghai. In addition, IVD Medical has its self-branded IVD product under IVD China to tap the lower tier IVD market.

Haemostasis IVD market provides organic growth for distribution business

While distribution business is a stable cash cow business and benefits from organic growth in medical demands, the upside comes from expansion in types of tests in distribution business, Dacheng's clinical laboratories solution and IVD China's potential in lower tier market. We see the centralized purchasing policy applied in general medicine is unlikely to be applied to high-end IVD market due to the lack of standardization. **We forecast a revenue CAGR of 17.3% and core net profit CAGR of 22.4% from 2018-2021e.**

Haemostasis IVD market in China is dominated by a few foreign brands; Sysmex enjoys a No.1 position with 43.9% market share

We see IVD Medical's distribution business a stable cash cow business due to a relatively stable competitive landscape in haemostasis market. IVD's distribution business will be driven by organic growth in IVD testing as well as increasing types of tests Sysmex' haemostasis analysers conduct. The haemostasis analysis market in China is centralized and dominated by a few foreign brands including Sysmex, Stago and Werfen with market share of 43.9%, 24.2% and 17.0% respectively in 2018. As IVD Medical is the sole Tier 1 distributor for Sysmex' haemostasis products, it enjoys a 37.9% in haemostasis Tier 1 distributor market.

Dacheng's clinical laboratories solution offers new revenue opportunities and helps to maintain direct relationship with hospitals

Facing immense cost-cutting pressure, more and more hospitals are willing to hand over the management of inventory, logistics and procurement of IVD products to distributors with solution services capabilities, in order to increase cost efficiency.

POCT market is fast growing and Chinese brands are taking over market shares from foreign players

With the policy push for hierarchical healthcare system, we see growing demand for IVD devices at lower tier hospitals and clinics. IVD Medical's self-branded products are primarily used for CRP test which is classified as POCT product. With continuous R&D efforts, we expect IVD Medical to expand its test types to SAA, PCT and FDP thus maximizing the reagents sales per device.

Price target: HK\$3.8 (24% upside)

We derive our Dec-20 price target of HK\$3.8 per share using a discounted cash flow model, assuming 12.0% cost of equity, 2% long-term growth rate.

Stock code: 1931.HK

Rating: Buy

Price target (HK\$)	3.8
Current price (HK\$, 16 Dec 2019)	3.1
Upside/downside %	24%
Market cap (HK\$ m)	4,134
Market cap (US\$ m)	531
Avg daily turnover (HK\$ m)	6

Source: Bloomberg, AMTD Research estimates

Key forecasts (pro forma)

(Rmb m)	2018	2019e	2020e	2021e
Core NP	221	299	353	406
yoy%	2%	35%	18%	15%
Revenue	2,110	2,482	2,918	3,409
yoy%	17%	18%	18%	17%
Gross margin	23.0%	23.5%	23.5%	23.6%
EBITDA margin	14.6%	15.9%	16.7%	16.4%
Core net margin	10.5%	12.0%	12.1%	11.9%

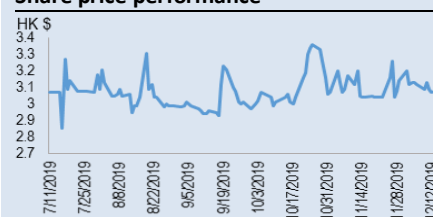
Source: Company data, AMTD Research estimates

Valuation – implied by the market

(Rmb m)	2018	2019e	2020e	2021e
P/E (adj.)	16.8	12.4	10.5	9.2
P/B	1.9	1.2	1.1	1.0
ROE	11.9%	11.7%	10.9%	11.4%

Source: Bloomberg, AMTD Research

Share price performance



Source: Bloomberg

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Financial forecast

We forecast consolidated core net profit to grow at a CAGR of 22.4% during 2018-2021e.

- 1) Consolidated revenue to grow at a CAGR of 17.3% during 2018-2021e.
- 2) Gross margin to remain stable at 23.5%-23.6% in 2019e-2021e.
- 3) Core net margin to remain stable at 11.9%-12.1% in 2019e-2021e.
- 4) A net cash position.

Vastec

Vastec's revenue growth will be mainly driven by the growth in distribution of Sysmex's haemostasis analysers and reagents; We forecast Vastec's revenue to reach Rmb2.90bn in 2021e from Rmb1.85bn in 2018.

- 1) Vastec has obtained the exclusive distribution rights as first-tier distributor for Sysmex's **4 test of thrombosis** on the same analyser models, on top of existing haemostasis tests.
- 2) The net increase of haemostasis analysers of around 700-800 per year driven by increasing penetration of hospitals and number of analysers per hospital to maintain the test results efficiency.
- 3) An average of test per analyser at 97,958, 97,958, 97,000 in 2019e, 2020e, 2021e, respectively.
- 4) A stable price at Rmb2.26 per test.
- 5) A stable gross margin at 20.5%, 20.6%, 20.7% in 2019e, 2020e, 2021e, respectively.

Original group – Distribution business

- 1) We forecast Dacheng's distribution business revenue to grow from Rmb408.4 mn in 2018 to Rmb716.7 mn in 2021e. We are conservative in assuming the growth of existing business and a stable gross margin.
- 2) We forecast Dacheng to expand its laboratory solution service to two new hospitals each year, which will bring in additional Rmb50-60mn revenue per year. We assume a stable gross margin for this business.

Original group – IVD China (Self-branded product)

- 1) We forecast self-branded product revenue to reach Rmb11.6 mn in 2021e. This business will have a higher gross margin as well as net margin than distribution business.
- 2) EZ-400 will maintain a stable revenue driven by the existing installation of the analysers – we assume no increase in 2019e and 2020e.

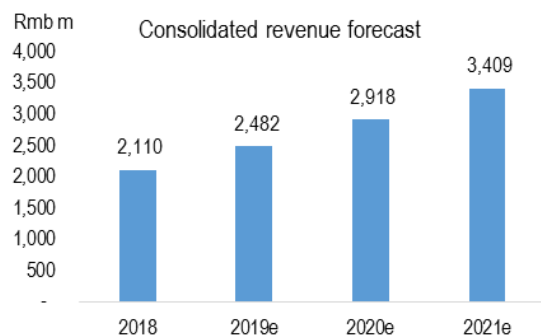
Operating leverage

- 1) The company's selling and distribution expenses have been declining as a share of revenue in recent years, suggesting a strong operating leverage;
- 2) We forecast selling and distribution expenses to be Rmb94.3 mn, Rmb105.1 mn, Rmb133.0 mn in 2019e, 2020e, 2021e, respectively.
- 3) We forecast normalized G&A cost to stay stable at around 4.0% during 2019e-2021e.

A net cash position

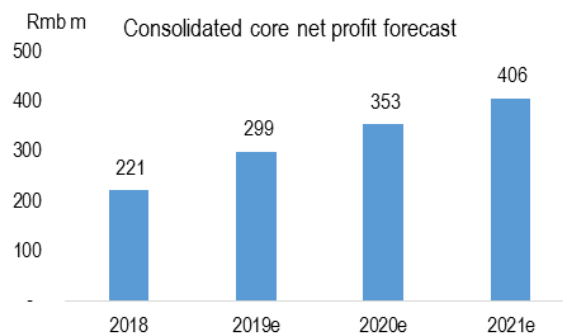
Both Vastec and Original Group have been maintaining a net operating cash inflows in recent years. We do not expect a reverse of such trend and expect IVD Medical to maintain a healthy net operating cash inflows.

Figure 1: Consolidated revenue forecast (pro forma) (2018-2021e)



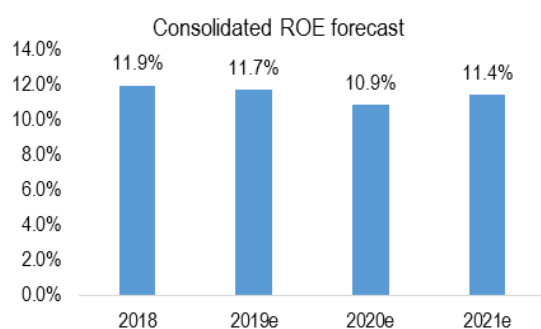
Source: Company data, AMTD Research estimates

Figure 2: Consolidated core net profit forecast (pro forma) (2018-2021e)



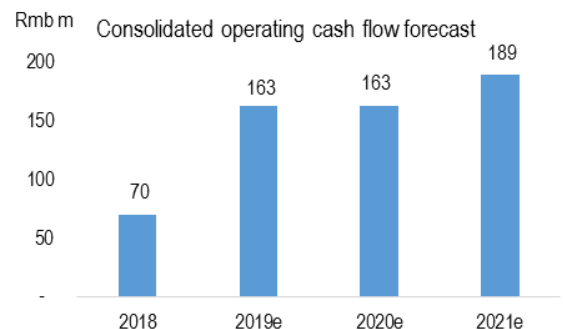
Source: Company data, AMTD Research estimates

Figure 3: Consolidated ROE forecast (pro forma) (2018-2021e)



Source: Company data, AMTD Research estimates

Figure 4: Consolidated operating cash flow forecast (pro forma) (2018-2021e)



Source: Company data, AMTD Research estimates

Figure 5: Consolidated P&L forecast (2016-2021e)

P&L (Rmb '000)	2016	2017	2018	2019e	2019e	2020e	2021e
	<i>Pro forma</i>	<i>Pro forma</i>	<i>Pro forma</i>	<i>Reporting</i>	<i>Pro forma</i>	<i>Pro forma</i>	<i>Pro forma</i>
Total Revenue	1,565,511	1,798,294	2,109,949	2,323,947	2,482,461	2,918,089	3,409,266
Original Group	290,441	338,268	413,635	501,040	501,040	605,375	728,282
Vastec	1,380,870	1,595,626	1,852,514	1,987,345	2,160,158	2,511,852	2,898,377
Distribution of Sysmex's haemostasis products-Vastec sold to Original	(105,800)	(135,600)	(156,200)	(164,438)	(178,737)	(199,138)	(217,393)
Cost of sales	(1,151,329)	(1,329,663)	(1,625,338)	(1,775,649)	(1,898,716)	(2,232,676)	(2,605,381)
Original Group	(206,543)	(230,054)	(296,964)	(360,378)	(360,378)	(436,155)	(524,731)
Vastec	(1,050,586)	(1,235,209)	(1,484,574)	(1,579,709)	(1,717,075)	(1,995,659)	(2,298,043)
Distribution of Sysmex's haemostasis products-Vastec sold to Original	105,800	135,600	156,200	164,438	178,737	199,138	217,393
Gross Profit	414,182	468,631	484,611	548,297	583,744	685,413	803,885
Original Group	83,898	108,214	116,671	140,661	140,661	169,220	203,552
Vastec	330,284	360,417	367,940	407,636	443,083	516,193	600,333
Distribution of Sysmex's haemostasis products-Vastec sold to Original							
Selling and distribution expenses	(115,521)	(90,483)	(92,602)	(88,310)	(94,334)	(105,051)	(132,961)
Original Group	(11,683)	(10,305)	(11,631)	-	-	-	-
Vastec	(103,838)	(80,178)	(80,971)	-	-	-	-
Administrative expenses	(74,264)	(80,445)	(104,725)	(108,900)	(115,082)	(115,265)	(136,371)
Original Group	(44,554)	(47,624)	(67,230)	-	-	-	-
Vastec	(29,710)	(32,821)	(37,495)	-	-	-	-
Depreciation	(17,236)	(19,408)	(24,072)	(20,916)	(22,342)	(26,263)	(30,683)
Amortization of intangibles	(476)	(1,260)	(1,260)	(1,628)	(1,482)	(1,743)	(2,036)
Other operating income/expenses	(6,378)	(3,131)	(5,169)	(3,486)	(3,724)	(5,836)	(6,819)
Original Group	(878)	(263)	(328)	-	-	-	-
Vastec	(5,500)	(2,868)	(4,841)	-	-	-	-
Operating expenses	(196,163)	(174,059)	(202,496)	(200,696)	(213,139)	(226,152)	(276,151)
EBIT	218,019	294,572	282,115	347,602	370,605	459,261	527,734
EBITDA	235,731	315,240	307,447	370,145	394,430	487,267	560,454
Other income and gains	14,242	11,403	33,219	17,048	12,412	23,345	27,274
Finance costs	(7,352)	(7,732)	(6,633)	(6,000)	(6,000)	(8,800)	(8,800)
Share of profits of associates	(462)	(462)	284,877	-	-	-	-
(Impairment) reversal of impairment of trade receivables	(647)	1,211	(4,129)	-	-	-	-
Profit before tax	223,800	298,992	589,449	358,649	377,017	473,806	546,208
Income tax expense	(63,146)	(82,442)	(91,756)	(89,662)	(94,254)	(118,452)	(136,552)
Profit for the year/period	160,654	216,550	497,693	268,987	282,763	355,355	409,656
Non-controlling interests	-	-	(3,932)	(2,000)	(2,000)	(2,000)	(4,000)
Attributable net profit	160,654	216,550	493,761	266,987	280,763	353,355	405,656
Adjustment	462	462	(272,343)	18,266	18,266	-	-
IPO expense	-	-	12,534	18,266	18,266	-	-
Share of profits of associates	462	462	(284,877)	-	-	-	-
Core net profit	161,116	217,012	221,418	285,253	299,029	353,355	405,656
Per share data	2016	2017	2018	2019e	2019e	2020e	2021e
EPS (core)	5.26	4.15	4.24	0.41	0.43	0.27	0.30
DPS		2.18	0.80	0.08	0.08	0.05	0.06
BPS		33.1	38.3	4.51	4.51	2.55	2.80

Source: Company data, AMTD Research estimates

For "2019e-Reporting" forecast, we projected the consolidated P&L by excluding the January revenue and expenses of Vastec, and recorded investment income from Vastec for January instead; Vastec is consolidated into IVD's group financials starting from February 2019 post completion of the acquisition.

Figure 6: Group revenue forecast by business line (2016-2021e)

(Rmb '000)	2016	2017	2018	2019e	2019e	2020e	2021e
	<i>Pro forma</i>	<i>Pro forma</i>	<i>Pro forma</i>	<i>Reporting</i>	<i>Pro forma</i>	<i>Pro forma</i>	<i>Pro forma</i>
Revenue							
Distribution business	1,663,966	1,847,400	2,137,836	2,353,928	2,515,435	2,945,236	3,425,446
IVD reagents and other consumables	1,267,872	1,477,126	1,736,010	1,898,991	2,023,330	2,296,343	2,569,653
<i>Original</i>	271,336	294,093	366,983	469,096	469,096	564,711	679,282
<i>Vastec</i>	996,536	1,183,033	1,369,027	1,429,896	1,554,234	1,731,633	1,890,371
IVD analysers	396,094	370,274	401,826	426,991	461,730	547,643	552,043
<i>Original</i>	11,760	25,289	41,457	27,500	27,500	33,000	37,400
<i>Vastec</i>	384,334	344,985	360,369	399,491	434,230	514,643	514,643
Thrombosis	-	-	-	27,945	30,375	101,250	303,750
Self-branded products business	7,345	18,886	5,195	4,444	4,444	7,664	11,600
IVD reagents and other consumables	2,914	18,847	5,195	4,444	4,444	7,664	10,640
IVD analysers	4,431	39	-	-	-	-	960
Maintenance services	-	67,608	123,118	130,013	141,319	164,327	189,613
Adjustment	(105,800)	(135,600)	(156,200)	(164,438)	(178,737)	(199,138)	(217,393)
Revenue	1,565,511	1,798,294	2,109,949	2,323,947	2,482,461	2,918,089	3,409,266
yoy %							
Distribution business		11.0%	15.7%		17.7%	17.1%	16.3%
IVD reagents and other consumables		16.5%	17.5%		16.6%	13.5%	11.9%
<i>Original</i>		8.4%	24.8%		27.8%	20.4%	20.3%
<i>Vastec</i>		18.7%	15.7%		13.5%	11.4%	9.2%
IVD analysers		-6.5%	8.5%		14.9%	18.6%	0.8%
<i>Original</i>		115.0%	63.9%		-33.7%	20.0%	13.3%
<i>Vastec</i>		-10.2%	4.5%		20.5%	18.5%	0.0%
Thrombosis						233.3%	200.0%
Self-branded products business		157.1%	-72.5%		-14.5%	72.5%	51.4%
IVD reagents and other consumables		546.8%	-72.4%		-14.5%	72.5%	38.8%
IVD analysers		-99.1%					
Maintenance services			82.1%		14.8%	16.3%	15.4%
Revenue		14.9%	17.3%		14.4%	17.5%	16.8%

Source: Company data, AMTD Research estimates

For "2019e-Reporting" forecast, we projected the consolidated P&L by excluding the January revenue and expenses of Vastec, and recorded investment income from Vastec for January instead; Vastec is consolidated into IVD's group financials starting from February 2019 post completion of the acquisition.

Figure 7: Consolidated P&L growth rate and key ratios (pro forma) (2016-2021e)

Growth rates and key ratios	2016	2017	2018	2019e	2020e	2021e
Gross margin	26.5%	26.1%	23.0%	23.5%	23.5%	23.6%
Distribution business	24.6%	23.1%	18.9%	19.2%	19.2%	19.4%
IVD reagents and other consumables	27.6%	25.0%	20.9%	21.1%	21.2%	21.3%
Distribution of Sysmex's haemostasis products-Vastec sold to Original	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IVD analysers	14.8%	15.6%	10.4%	10.3%	10.3%	10.3%
Self-branded products business	73.0%	84.7%	80.1%	64.0%	56.0%	55.0%
IVD reagents and other consumables	72.8%	84.9%	80.1%	64.0%	56.0%	60.0%
IVD analysers	73.1%	7.7%	na	na	na	na
Maintenance services	na	38.7%	61.3%	70.0%	70.0%	70.0%
EBITDA margin	15.1%	17.5%	14.6%	15.9%	16.7%	16.4%
Net profit margin (core)	10.3%	12.1%	10.5%	12.0%	12.1%	11.9%
Net cash	na	198,978	251,151	572,805	635,184	713,317
Gearing ratio	na	5.8%	2.0%	3.5%	3.2%	3.0%
ROE	na	12.6%	11.9%	11.7%	10.9%	11.4%
ROA	na	8.0%	7.6%	8.9%	9.3%	9.8%
Marketing expense % of revenue	7.4%	5.0%	4.4%	3.8%	3.6%	3.9%
G&A % of revenue	4.7%	4.5%	5.0%	4.6%	4.0%	4.0%
G&A % of revenue (ex-IPO cost)	4.7%	4.5%	4.5%	3.9%	4.0%	4.0%
R&D % of revenue	0.01%	0.03%	0.00%	0.00%	0.00%	0.00%
Income tax rate %	28.2%	27.6%	15.6%	25.0%	25.0%	25.0%
Income tax rate % ex IPO expense	28.2%	27.6%	15.3%	23.8%	25.0%	25.0%
		0.0%	0.0%	0.0%	0.0%	0.0%
yoy %						
Gross Profit		13.1%	3.4%	20.5%	17.4%	17.3%
Distribution business		4.3%	-5.0%	19.0%	17.5%	17.4%
Self-branded products business		198.6%	-74.0%	-31.6%	50.9%	48.7%
Maintenance services		na	188.4%	31.1%	16.3%	15.4%
EBIT		35.1%	-4.2%	31.4%	23.9%	14.9%
EBITDA		33.7%	-2.5%	28.3%	23.5%	15.0%
Profit for the year/period		34.8%	129.8%	-43.2%	25.7%	15.3%
Attributable net profit		34.8%	128.0%	-43.1%	25.9%	14.8%
Core net profit		34.7%	2.0%	35.1%	18.2%	14.8%

Source: Company data, AMTD Research estimates

Figure 8: Vastec revenue forecast breakdown (2016-2021e)

(Rmb '000)	2016	2017	2018	2019e	2020e	2021e
Distribution business	1,380,870	1,528,018	1,729,396	2,018,839	2,347,526	2,708,763
IVD reagents and other consumables	996,536	1,183,033	1,369,027	1,554,234	1,731,633	1,890,371
Distribution of Sysmex's haemostasis products-Sold to Original as % of IVD reagents and other consumables	105,800	135,600	156,200	178,737	199,138	217,393
	10.6%	11.5%	11.4%	11.5%	11.5%	11.5%
IVD analysers	384,334	344,985	360,369	434,230	514,643	514,643
Thrombosis	-	-	-	30,375	101,250	303,750
Maintenance services	-	67,608	123,118	141,319	164,327	189,613
Revenue	1,380,870	1,595,626	1,852,514	2,160,158	2,511,852	2,898,377
Distribution business	2016	2017	2018	2019e	2020e	2021e
IVD reagents and other consumables						
No. of Class III hospital covered - beginning			1,041	1,091	1,141	1,196
Newly added			50	50	55	55
No. of Class III hospital covered - end		1,041	1,091	1,141	1,196	1,251
No. of total Class III hospitals in China	2,232	2,340	2,445	2,457	2,580	2,709
yoy %		4.8%	4.5%	5.0%	5.0%	5.0%
Penetration rate		44.5%	44.6%	46.4%	46.4%	46.2%
IVD reagents and other consumables ('000 tests)	479,875	552,742	622,912	686,584	764,950	835,073
IVD analysers - beginning	3,615	4,650	5,462	6,359	7,009	7,809
(+) New	1,435	1,221	1,210	1,350	1,600	1,600
(-) Disposal	400	409	313	700	800	800
Useful year	5	5	5	5	5	5
IVD analysers - end	4,650	5,462	6,359	7,009	7,809	8,609
Cumulative distributed analyser	4,650	5,462	6,359	7,009	7,809	8,609
Test per analyser ('000 tests)	103	101	98	97.958	97.958	97.000
Test per analyser (Rmb)	214,309	216,593	215,290	221,748	221,748	219,581
ASP						
IVD reagents and other consumables (Rmb per test)	2.08	2.14	2.20	2.26	2.26	2.26
yoy inflation %	-	3.1%	2.7%	3.0%	0.0%	0.0%
IVD analysers (Rmb)	267,829	282,543	297,826	321,652	321,652	321,652
yoy inflation %				0%	0%	0%
Thrombosis						
Hospitals				75	150	300
Penetration rate				6.6%	12.5%	24.0%
No. of analyser per hospital				1	1	1
Test per day per analyser				20	25	30
Work days per year (Day)				150	200	250
Thrombosis ('000 tests)				225	750	2,250
Thrombosis ASP (Rmb)				135	135	135
Maintenance services	2016	2017	2018	2019e	2020e	2021e
As % of distribution business	-	4.4%	7.1%	7.0%	7.0%	7.0%

Source: Company data, AMTD Research estimates

Figure 9: Original Group revenue forecast breakdown (2016-2021e)

(Rmb '000)	2016	2017	2018	2019e	2020e	2021e
Distribution business	283,096	319,382	408,440	496,596	597,711	716,682
IVD reagents and other consumables	271,336	294,093	366,983	469,096	564,711	679,282
IVD analysers	11,760	25,289	41,457	27,500	33,000	37,400
Self-branded products business	7,345	18,886	5,195	4,444	7,664	11,600
IVD reagents and other consumables	2,914	18,847	5,195	4,444	7,664	10,640
IVD analysers	4,431	39	-	-	-	960
Revenue	290,441	338,268	413,635	501,040	605,375	728,282
Distribution business	2016	2017	2018	2019e	2020e	2021e
IVD reagents and other consumables						
IVD reagents and other consumables ('000 tests)	87,039	119,260	139,853	178,767	215,205	258,867
IVD analysers - begin	210	251	346	440	477	531
(+) New	83	145	163	125	150	170
(-) Disposal	42	50	69	88	95	106
Useful year	5	5	5	5	5	5
IVD analysers - end	251	346	440	477	531	595
Cumulative distributed analyser	251	346	440	477	531	595
Haemostasis	178	210	236			
Urinalysis	43	88	145			
Others	30	48	59			
Test per analyser ('000 tests)	347	345	318	375	405	435
ASP						
IVD reagents and other consumables (Rmb per test)	3.1	2.5	2.6	2.6	2.6	2.6
inflation %	-	-21%	6%	0%	0%	0%
IVD analysers (Rmb)	141,687	174,407	254,337	220,000	220,000	220,000
Self-branded products business	2016	2017	2018	2019e	2020e	2021e
IVD reagents and other consumables	2,914	18,847	5,195	4,444	7,664	10,640
IVD reagents and other consumables ('000 tests)	821	5,437	1,566	1,111	1,916	2,660
IVD analysers - new	172	5	-	-	-	120
CRP revenue	-	-	316	444	2,664	4,440
IVD reagents and other consumables ('000 tests)	821	5,437	195	111	666	1,110
IVD analysers - begin	45	217	222	222	222	222
(+) New	172	5	-	-	-	-
(-) Disposal	-	-	-	-	-	-
Useful year	5	5	5	5	5	5
IVD analysers - end	217	222	222	222	222	222
Test per analyser ('000 tests)	25.0	24.5	0.9	0.5	3.0	5.0
EZ-400 revenue			5,000	4,000	5,000	6,200
IVD reagents and other consumables ('000 tests)			1,250	1,000	1,250	1,550
IVD analysers - begin			-	500	500	500
(+) New			-	0	0	120
(-) Disposal			-	-	-	-
Useful year	5	5	5	5	5	5
IVD analysers - end			500	500	500	620
Test per analyser ('000 tests)			2.5	2.0	2.5	2.5
ASP						
IVD reagents and other consumables (Rmb per test)	3.5	3.5	3.3	4.0	4.0	4.0
CRP			4.0	4.0	4.0	4.0
EZ-400			4.0	4.0	4.0	4.0
IVD analysers (Rmb)	25,762	7,800	na	8,000	8,000	8,000

Source: Company data, AMTD Research estimates

Figure 10: Consolidated cash flow forecast (2018-2021e)

Cash flow (Rmb '000) Pro forma	2018	2019e	2020e	2021e
Net Loss/Profit	493,761	280,763	353,355	405,656
Depreciation	24,072	24,072	24,072	24,072
Amortization of Intangibles	1,260	1,482	1,743	2,036
Gain on derecognition of associates	(287,488)	-	-	-
Change of OWC	(161,411)	(143,232)	(216,119)	(242,500)
- net operating working capital	795,519	938,751	1,154,871	1,397,370
Operating cash flow	70,194	163,085	163,050	189,264
Capex	(26,300)	(30,000)	(30,000)	(30,000)
EZ-400	8,945	-	-	-
Equity investments in associates	(252,645)	-	-	-
Gain on derecognition of associates	284,877	-	-	-
Others	11,569	-	-	-
Investing cash flow	26,445	(30,000)	(30,000)	(30,000)
Amounts Due To Shareholders	165,450	(651,625)	-	-
Proceeds from ST debt	(60,000)	70,000	-	-
Proceeds from LT debt	-	-	-	-
Dividend paid	(41,593)	(59,806)	(70,671)	(81,131)
Share issuance / (repurchases)	105	900,000	-	-
Minority	(4,420)	-	-	-
Change of reserves	(176,843)	-	-	-
Financing cash flow	(117,301)	258,569	(70,671)	(81,131)
Net cash flow	(20,661)	391,654	62,379	78,133
Cash balance	291,151	682,805	745,184	823,317

Source: Company data, AMTD Research estimates

Figure 11: Vastec historical cash flow

Cash flow (Rmb '000)	2016	2017	2018
CASH FLOWS FROM OPERATING ACTIVITIES			
Profit before tax	193,076	240,798	265,803
Adjustments for:			
Finance costs	7,254	7,732	6,633
Depreciation	8,492	7,514	7,064
(Gain)/loss on disposal of items of property, plant and equipment	(295)	185	(1,210)
Share of loss of an associate	462	259	344
Interest income	(272)	(536)	(1,059)
Operating cash flows before movements in working capital	208,717	255,952	277,575
Net change in working capital			
Increase in inventories	(172,235)	(58,782)	(59,675)
Increase in trade and bills receivables	(21,303)	(31,397)	(54,909)
Increase/(decrease) in prepayments and other receivables	(72,059)	(42,195)	26,974
Increase/(decrease) in trade payables	89,091	(25,172)	(32,244)
Decrease/(increase) in other payables and accruals	(2,516)	17,755	(27,397)
Cash generated from operations	29,695	116,161	130,324
Taxes paid	(43,121)	(47,648)	(63,591)
Net cash flows (used in)/from operating activities	(13,426)	68,514	66,733
CASH FLOWS FROM INVESTING ACTIVITIES			
Purchases of items of property, plant and equipment	(1,773)	(351)	(721)
Contribution to an investment in an associate	(250)	(502)	-
Proceeds from disposal of items of property, plant and equipment	381	711	3,452
Decrease in pledged deposits	4,433	8,634	5,269
Interest received	272	536	1,059
Net cash flows from investing activities	3,063	9,028	9,059
CASH FLOWS FROM FINANCING ACTIVITIES			
Advance from a related party	-	53,760	-
Repayment to a related party	-	-	(30,946)
New bank loan	130,000	200,000	400,000
Repayment of bank loans	(60,000)	(230,000)	(460,000)
Dividends paid	(34,891)	(28,143)	(35,989)
Interest paid	(7,254)	(7,732)	(6,633)
Net cash flows from/(used in) financing activities	27,855	(12,115)	(133,568)
NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS	17,492	65,427	(57,776)
Cash and cash equivalents at beginning of year	138,194	156,790	220,802
Effect of foreign exchange rate changes, net	1,104	(1,415)	652
CASH AND CASH EQUIVALENTS AT END OF YEAR	156,790	220,802	163,678

Source: Company data, AMTD Research estimates

Figure 12: Original group historical cash flow

Cash flow (Rmb '000)	2016	2017	2018
Net Loss/Profit	56,268	110,735	103,440
Depreciation	11,329	14,064	15,724
Amortization of Intangibles	476	1,260	1,260
Change of OWC	-	(98,800)	(6,704)
- net operating working capital	63,025	161,825	168,529
Operating cash flow	68,073	27,259	113,720
Capex	(26,375)	(18,433)	(15,667)
Purchase of Intangibles	(31,050)	-	-
Equity Investments In Associates/Affiliates	(27,779)	(58,394)	(61,668)
Goodwill	-	-	-
Investing cash flow	(85,204)	(76,827)	(77,335)
Proceeds from ST debt	-	-	-
Proceeds from LT debt	-	-	-
Dividend paid	(27,133)	(8,207)	(4,000)
Share issuance / (repurchases)	637,545	-	-
Minority	(34,976)	2,247	(4,420)
Change of reserves	6,986	(6,539)	8,092
Financing cash flow	582,422	(12,499)	(328)
Net cash flow	565,291	(62,067)	36,057
Cash balance	141,374	79,307	115,364

Source: Company data, AMTD Research estimates

Figure 13: Consolidated balance sheet forecast (2018-2021e)

Balance sheet (Rmb '000) Pro forma	2018	2019e	2020e	2021e
Cash and Equivalents	279,042	670,696	733,075	811,208
Restricted Cash (Short-Term)	12,109	12,109	12,109	12,109
Accounts Receivable and Other Receivables	330,165	374,069	439,712	513,725
Inventories	650,913	702,265	825,784	963,634
Prepayments	206,983	272,050	319,791	373,618
Amounts due from others	1,317	1,489	1,751	2,046
Current assets	1,480,529	2,032,680	2,332,222	2,676,341
Property Plant & Equipment - Net	65,848	71,761	77,689	83,617
Total Intangible Assets - Net	444,855	443,373	441,630	439,594
Equity Investments In Associates/Affiliates	6,731	6,731	6,731	6,731
Goodwill	1,087,899	1,087,899	1,087,899	1,087,899
Deferred tax asset (Long-Term)	2,599	2,599	2,599	2,599
Non-current assets	1,607,932	1,612,363	1,616,548	1,620,440
Total assets	3,088,461	3,645,042	3,948,770	4,296,781
Short-Term Borrowings	40,000	110,000	110,000	110,000
Trade Payables And Others	102,396	119,645	140,689	164,175
Amounts Due To Shareholders	651,625	-	-	-
Income Taxes Accrued/Payable	57,947	57,947	57,947	57,947
Deferred/Unearned Revenue (Short-Term)	100,204	100,204	100,204	100,204
Other payables	-	-	-	-
Current liabilities	952,172	387,796	408,840	432,326
Long Term Debt	-	-	-	-
Deferred Income Taxes (Liabilities)	135,926	135,926	135,926	135,926
Non-current liabilities	135,926	135,926	135,926	135,926
Total Share Capital	276	133,350	133,350	133,350
Additional Paid in Capital	1,514,112	2,281,038	2,281,038	2,281,038
Retained Earnings (Accumulated Deficit)	593,422	814,379	1,097,063	1,421,588
Other Equity	(114,696)	(114,696)	(114,696)	(114,696)
Attributable shareholders' equity	1,993,114	3,114,071	3,396,755	3,721,280
Minority/Non Controlling Int (Stckhldrs Eqty)	7,249	7,249	7,249	7,249
Total Shareholders Equity	2,000,363	3,121,320	3,404,004	3,728,529

Source: Company data, AMTD Research estimates

Valuation

DCF valuation – HK\$3.8 per share

Our price target of HK\$3.8 is based on the three-stage discounted cash flow model. This implies 2019e P/E (recurring) of 15.3x. We use a three-stage DCF model to derive our valuation. In the first stage (the fast growth stage), we forecast explicitly five year of free cash flows to the enterprise. In the second stage (medium term), the growth rates are gradually phased down to the perpetual growth rate. We derive the terminal multiple using the standard $(1+g)/(wacc-g)$. This cash flow stream is discounted using 10.9% weighted average cost of capital (“WACC”) assumption.

Figure 14: Derivation of DCF valuation

Stage 1	519
Stage 2	1,597
Stage 3	1,898
Net cash (HK \$mn)	573
Total equity value (Rmb mn)	4,587
Total equity value (HK \$mn)	5,107
Shares outstanding (mn)	1,333
Dec-20 Price target (HK\$)	3.8
Implied 2019e PE	15.3x
Implied 2020e PE	13.0x

Source: AMTD Research estimates

WACC: We derive a WACC of 10.9% for IVD Medical using: 1) risk-free rate of 4.0%; 2) a 5% equity market risk premium. We use 1.5 as the beta for IVD Medical, referring to the 1.5 average beta for medical distributors and IVD manufacturers & distributors listed in the A/H-share market.

Figure 15: WACC assumption

Risk-free rate	4.0%
Beta	1.5
Equity risk premium	5.0%
Cost-of-equity (%)	12%
Debt to equity ratio (%)	10%
Tax rate (%)	25%
Cost of debt	7%
WACC (%)	10.9%
Perpetual growth rate	2%
Retention rate	30%
Perpetual ROIC	6.7%

Source: AMTD Research estimates

Comparable

We identify IVD Medical's comparable: PRC medical distributors and IVD manufacturers & distributors listed in Hong Kong and mainland China. IVD Medical is currently trading on 12.4x 2019e P/E, while its A-share IVD manufacturers & distributors peers are trading on average at around 23.0x 2019e P/E, and its medical distributors peers are trading on average at around 16.7x 2019e P/E, showing IVD Medical's growing potential to stand out in the market.

Figure 16: IVD Medical valuation comparable

		Price	Mkt cap	P/E			P/B			Div. yield	EV/EBITDA		ROE %		Net gearing
		(LC)	US\$mn	2018	2019e	2020e	2018	2019e	2020e	2018	2018	2019e	2018	2019e	2018
<i>Medical distributors</i>															
1099.hk	Sinopharm	26.9	10,262	11.5x	11.2x	9.8x	1.6x	1.5x	1.3x	2.6%	7.1x	6.7x	14.4	14.2	22%
3320.hk	CR Pharma	7.2	5,793	11.2x	9.5x	8.6x	1.1x	1.0x	0.9x	1.8%	6.7x	6.0x	9.9	10.9	10%
2607.hk	Shanghai Pharma	14.9	6,680	9.2x	8.8x	7.9x	1.0x	0.9x	0.8x	3.3%	8.7x	7.9x	10.6	10.4	38%
601607.ss	Shanghai Pharma - A	17.9	6,680	13.0x	11.9x	10.6x	1.3x	1.2x	1.1x	2.3%	10.3x	8.9x	10.6	10.4	38%
603456.ss	Jiuzhou Pharma	13.8	1,585	68.8x	42.3x	30.2x	4.0x	3.7x	3.4x	1.5%	29.1x	na	5.8	8.8	Net cash
Average				22.7x	16.7x	13.4x	1.8x	1.7x	1.5x	2.3%	12.4x	7.4x	10.3	10.9	27.0%
Median				11.5x	11.2x	9.8x	1.3x	1.2x	1.1x	2.3%	8.7x	7.3x	10.6	10.4	29.8%
<i>IVD manufacturers & distributors</i>															
2393.hk	Yestar Healthcare	1.3	403	8.8x	8.2x	7.0x	2.4x	1.8x	1.5x	0.0%	4.3x	3.9x	27.7	18.6	83%
300244.sz	Dian Diagnostics	22.2	1,973	31.3x	28.4x	22.7x	3.3x	3.1x	2.8x	0.1%	17.4x	14.5x	12.9	11.0	48%
300439.sz	Medical System	13.5	669	19.0x	12.1x	na	2.5x	na	na	1.1%	10.7x	na	12.8	na	53%
300463.sz	Maccura Bio	28.4	2,266	35.3x	29.8x	23.7x	5.8x	5.4x	5.0x	0.6%	22.6x	20.4x	17.1	16.6	28%
002022.sz	Kehua Bio	11.8	869	29.1x	28.1x	26.2x	2.8x	2.6x	2.4x	0.6%	16.5x	17.7x	10.0	9.4	Net cash
603108.ss	Runda Medical	10.1	838	22.5x	16.6x	13.7x	2.3x	2.1x	1.8x	0.9%	9.8x	8.2x	10.9	12.5	72%
A-share average				27.5x	23.0x	21.6x	3.3x	3.3x	3.0x	0.6%	15.4x	15.2x	12.7	12.4	50.4%
AMTD Valuation															
IVD Medical		3.1	531	15.3x	13.0x		1.5x	1.3x			11.6x		11.9	11.7	Net cash

Priced as at 16 Dec 2019; Source: Bloomberg, AMTD Research estimates

Major competitors in IVD sector expand very fast through leveraging up and acquisition

During the past few years, most of IVD distributors have expanded their businesses at a very fast pace through mergers and acquisitions. The average revenue growth CAGR reached 41.4% during FY16-18. Aggressive expanding put pressure on their operating integration as shown by the high operating expenses. On average, the SG&A accounted for about 19% of their total revenue, and account receivable turnover days was around 125 days. On the other hand, quick expansion also increased leverage, as their average net gearing was over 50% by the end of 2018.

Figure 17: Revenue and margins comparison

(Rmb mn)		Revenue				CAGR	Gross margin				EBITDA margin			
		FY15	FY16	FY17	FY18	FY16-18	FY15	FY16	FY17	FY18	FY15	FY16	FY17	FY18
Medical distributors														
1099 HK	Sinopharm	228,673	258,388	308,354	344,526	15%	8%	8%	8%	9%	4%	4%	5%	5%
3320 HK	CR Pharma	118,819	134,103	149,531	160,218	9%	16%	15%	17%	19%	8%	7%	7%	8%
2607 HK	Shanghai Pharma	105,517	120,428	130,455	159,084	15%	12%	12%	13%	14%	5%	5%	6%	5%
603456 CH	Jiuzhou Pharma	1,437	1,638	1,693	1,840	6%	n.a.	n.a.	36%	38%	n.a.	n.a.	29%	29%
IVD manufacturers & distributors														
2393 HK	Yestar Healthcare	2,455	3,022	3,927	4,447	21%	21%	25%	28%	27%	14%	17%	20%	18%
300244 CH	Dian Diagnostics	1,855	3,813	4,985	6,941	35%	35%	33%	35%	34%	14%	13%	15%	15%
300439 CH	Medical System	677	1,046	2,567	3,118	73%	64%	58%	41%	38%	37%	31%	24%	22%
300463 CH	Maccura Bio	1,056	1,477	1,953	2,661	34%	58%	54%	54%	51%	38%	35%	35%	28%
002022 CH	Kehua Bio	1,147	1,383	1,584	1,978	20%	43%	43%	42%	41%	24%	25%	24%	21%
603108 CH	Runda Medical	1,625	2,157	4,301	5,938	66%	31%	32%	31%	30%	19%	20%	19%	20%
IVD sub sector Average						41%	42%	41%	39%	37%	24%	24%	23%	21%
IVD MEDICAL			1,566	1,798	2,110	16%		26%	26%	23%		15%	18%	15%

Source: Company data, AMTD Research

Figure 18: Operating and leverage comparison

(Rmb mn)		SG&A as % of rev				AR turnover days				Net gearing			
		FY15	FY16	FY17	FY18	FY15	FY16	FY17	FY18	FY15	FY16	FY17	FY18
Medical distributors													
1099 HK	Sinopharm	4%	4%	4%	5%	93	84	76	88	22%	18%	8%	22%
3320 HK	CR Pharma	10%	9%	10%	12%	92	92	97	92	47%	15%	26%	10%
2607 HK	Shanghai Pharma	8%	8%	8%	10%	83	78	82	84	9%	14%	18%	29%
603456 CH	Jiuzhou Pharma	n.a.	n.a.	15%	16%	56	62	70	86	8%	Net cash	Net cash	Net cash
IVD manufacturers & distributors													
2393 HK	Yestar Healthcare	9%	11%	12%	12%	82	72	81	101	Net cash	43%	162%	83%
300244 CH	Dian Diagnostics	23%	20%	22%	21%	122	96	112	119	40%	48%	83%	40%
300439 CH	Medical System	31%	32%	20%	20%	109	96	97	136	Net cash	Net cash	27%	53%
300463 CH	Maccura Bio	23%	23%	22%	26%	200	169	179	179	Net cash	Net cash	9%	26%
002022 CH	Kehua Bio	22%	21%	22%	23%	73	59	65	81	Net cash	Net cash	Net cash	Net cash
603108 CH	Runda Medical	16%	17%	15%	13%	128	126	118	131	40%	20%	85%	72%
IVD sub sector Average		21%	21%	19%	19%	119	103	109	125			73%	55%
IVD MEDICAL			12%	10%	9%			45	48		Net cash	Net cash	Net cash

Source: Company data, AMTD Research

Long-term relationship with Sysmex

IVD Medical helped Sysmex to build its haemostasis IVD market in China from zero to >40% market share

Vastec – Sysmex’ sole national tier 1 distributor for Sysmex’ haemostasis products

IVD Medical started to help Sysmex distribute its haemostasis devices and reagents in 1997. Vastec is known as a leading tier 1 distributor of IVD products in the PRC. It is the sole national distributor of Sysmex’ haemostasis products with exclusive distribution rights in the PRC, since 1997. Vastec also procures a diversified portfolio of IVD products from other leading international brands and distributes them in the PRC. During the past few years, Vastec mainly procured IVD products from three international brands including Sysmex, Tecan and Alifax, and most of them were procured directly from manufacturers.

Dacheng – Sysmex’ Shanghai’s distributor for haemostasis products and urinalysis products

Dacheng has been a regional distributor of Sysmex’ haemostasis products in Shanghai for the past six years. As a testament and affirmation of Dacheng’s reputation and financial performance, it was further appointed as a regional distributor for Sysmex’ urinalysis products in Shanghai in April 2016.

Sysmex is a leading player in global IVD market

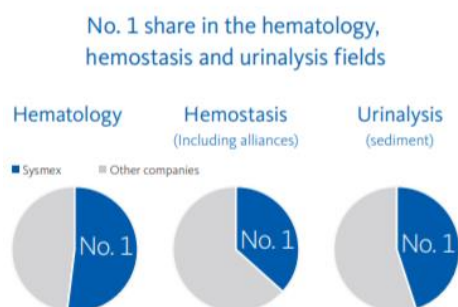
Sysmex is a Japanese company (TYO: 6869) that operates in the domain of IVD testing, which involves examining blood, urine and other samples. The company provides customers with a variety of products and services, in more than 190 countries and regions.

According to Sysmex, it ranks among the **top seven** companies in the world in the IVD domain. In the three fields of hematology, urinalysis (sediment) and hemostasis, it maintains a dominating market share (including through alliances).

Its core product lines include testing devices and reagents in tests of hematology, urinalysis, haemostasis and immunochemistry. In line with technological innovation and its application to healthcare in recent years, the realization of personalized medicine has begun, such as performing risk diagnosis and monitoring the treatment results of individual patients. Thus, IVD is playing an increasingly important role in healthcare.

Figure 19: Sysmex has dominating market share in hematology, haemostasis and Urinalysis

Global Market Share



Note: Sysmex estimates based on 2017 data

Source: Sysmex annual report 2018

Figure 20: Sysmex is the No.1 brand in China's haemostasis IVD market

Market Scale and Sysmex's Business Domains

Testing Field	Market Scale (\$ million)	Market Growth Rate	Composition of Sales (Fiscal year ended March 31, 2018)	Sales and Service Area	Principal Alliances
Hematology	3,750	5%	62.0%	Global	F. Hoffman-La Roche
Urinalysis Of which, sediment urinalysis	1,050 (450)	4% 5%	7.3%	Global	EIKEN CHEMICAL
Hemostasis	2,900	6%	16.0%	Global	Siemens Healthcare Diagnostics
Immunochemistry	19,450	7%	4.0%	Asia	—
Others (Genes, FCM, etc.)	36,450	—	10.7%	Global	—
IVD market	63,600	6%	—	—	—

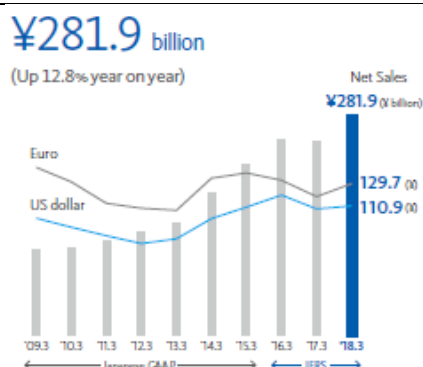
Source: Sysmex annual report 2018

Sysmex' strategic alliance with Siemens

Sysmex has been maintaining a sustainable growth through R&D efforts and formation of strategic alliance.

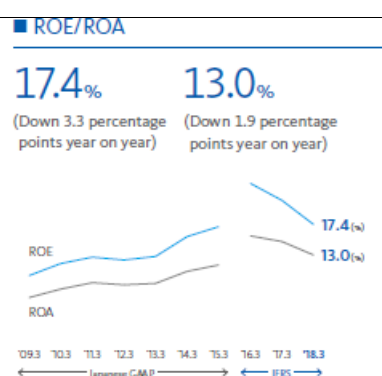
In 1995, Siemens, an industrial manufacturing company based in Germany that focuses on equipment in various areas including healthcare, and Sysmex entered into an agreement in which they agreed to establish a strategic alliance for haemostasis products. Sysmex will supply its customers with IVD reagents manufactured by Siemens, bearing the packaging and branding of Siemens.

Figure 21: Sysmex continues to deliver growth in the past ten years



Source: Sysmex annual report 2018

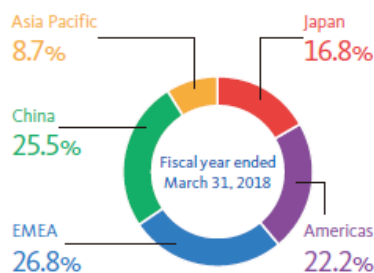
Figure 22: While maintaining strong profitability



Source: Sysmex annual report 2018

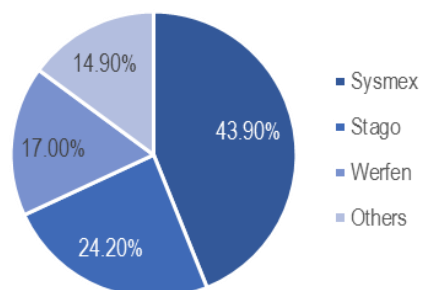
Figure 23: China is the second largest market to Sysmex, accounting for 25.5% of its revenue

■ Sales by Geographic Region



Source: Sysmex annual report 2018

Figure 24: Sysmex is the No.1 brand in China's haemostasis IVD market in 2018

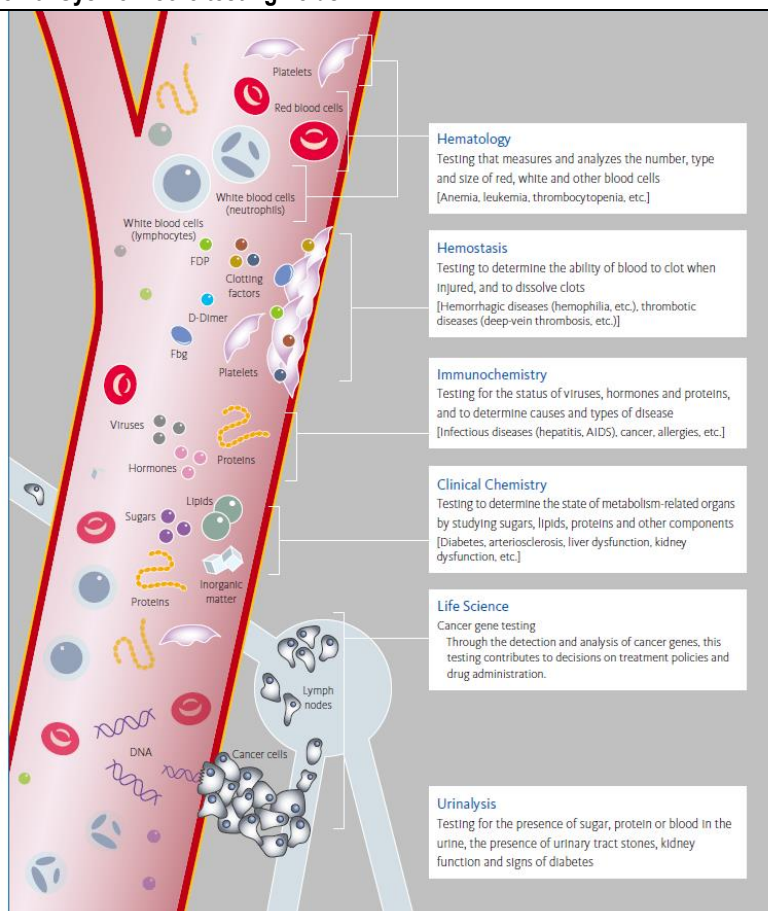


Source: Frost & Sullivan

Figure 25: Sysmex' key haemostasis analyser and top reagents distributed by Vastec

Cleaning fluid for the automated coagulation analyser and reagents

Source: Company data

Figure 26: Sysmex' core testing fields

Source: Sysmex annual report

Haemostasis IVD market provides organic growth for distribution business

We see IVD Medical's distribution business a stable cash cow business due to a relatively stable competitive landscape in haemostasis market in China. IVD's distribution business will be driven by organic growth in IVD testing as well as increasing types of tests Sysmex' haemostasis analysers conduct.

Increasing types of haemostasis tests driving strong growth

Sysmex' tests have expanded from 4 tests of haemostasis (凝血四项) to 7 tests of haemostasis (凝血七项). Sysmex' analysers are able to conduct in total 20 types of tests. At end of 2018, Dacheng has obtained the sole distribution rights of Sysmex' 4 tests of thrombosis (血栓新四项). The thrombosis tests are used to detect early thrombotic disease and evaluating surgical risks. This will be a significant growth driver for IVD Medical's revenue starting in the following years.

Figure 27: Most common haemostasis assays

Haemostasis 4 assays 凝血四项	PT(血浆凝血酶原时间), APTT (活化部分凝血活酶时), TT(凝血酶时间), FIB (纤维蛋白原)
Haemostasis 7 assays 凝血七项	PT(血浆凝血酶原时间), APTT (活化部分凝血活酶时), TT(凝血酶时间), FIB (纤维蛋白原), FDP (纤维蛋白(原)降解产物), D- Dimer(D - 二聚体), AT-III(抗凝血酶III)
Thrombosis 4 assays 血栓新四项	TAT(凝血酶-抗凝血酶复合物), PIC(纤溶酶-抗纤溶酶复合物), TM(血栓调节蛋白), t-PAI- C(组织纤溶酶原激活物- 纤溶酶原激活物抑制 剂-1复合物)

Source: Wikipedia

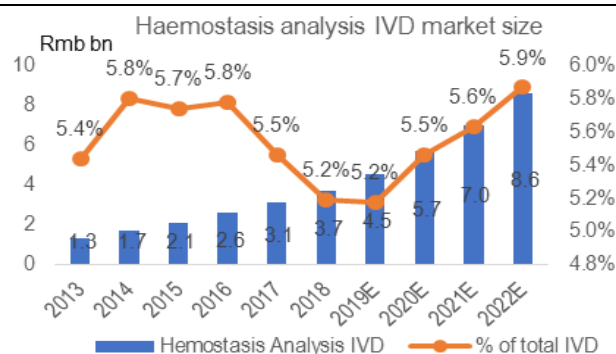
Figure 28: Sysmex haemostasis analysers are able to conduct multiple types of tests – this will provide upside potential

FT Dade [®] Innovin [®] Thrombareil [®] S	Protein C pathway Protein C ProC [®] Act [®] ProC Glob [®] F V Leiden Protein S Ac INNOVANCE [®] Free PS Ag [®]	Von Willebrand factor vWF Ag [®] INNOVANCE vWF Ac [®] BC von Willebrand Reagent	Betrorabin time Betrorabin
APTT Dade Actin [®] Dade Actin FS Dade Actin FSL Pethrombin [®] SL	Heparin Berichrom [®] Heparin INNOVANCE Heparin [®]	Chromogenic Berichrom Factor VIII Chromogenic Berichrom Factor XIII Chromogenic [®] Berichrom C1-inhibitor [®] Berichrom a2-Antiplasmin Berichrom Plasminogen Berichrom Protein C	Factor deficiency Factor II Factor V Factor VII Factor VIII Factor IX Factor X Factor XI Factor XII
Fibrinogen Dade Thrombin	Antithrombin III Berichrom Antithrombin III (A) INNOVANCE Antithrombin	Platelets ADP [®] , ¹¹ Epinephrine [®] , ¹¹ Arachidonic Acid [®] , ¹¹ Ristocetin [®] , ¹¹ Collagen [®] , ¹¹	Lupus anticoagulant LA1 screening LA2 confirmation
Thrombin time Test Thrombin Thromboclotin [®] S	D-Dimer INNOVANCE D-Dimer		

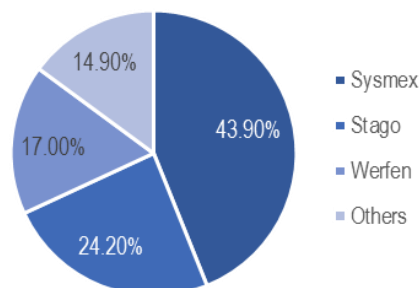
Source: Siemens website <https://www.siemens-healthineers.com/hemostasis/systems/sysmex-cs-5100-system/assays>

Haemostasis IVD market's relatively stable competitive landscape

The haemostasis analysis market in China is centralized and dominated by foreign brands with top 3 brands enjoying around 85% market share. Sysmex, Stago and Werfen had market share of 43.9%, 24.2% and 17.0% respectively in 2018. As IVD Medical is the sole Tier 1 distributor for Sysmex' Haemostasis products, it enjoys a 37.9% market share in haemostasis Tier 1 distributor market.

Figure 29: Haemostasis analysis market is growing along with overall IVD market

Source: Frost & Sullivan

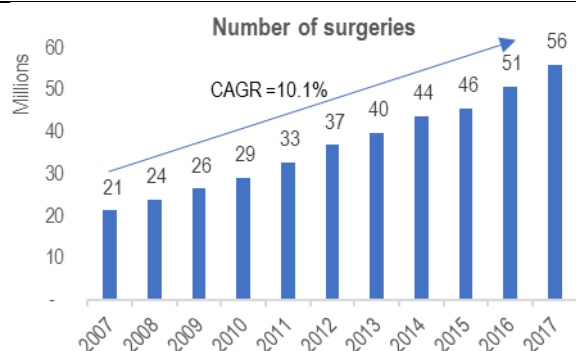
Figure 30: Market share of China haemostasis analysis IVD market, 2018 – Top 3 players enjoy around 85% market share

Source: Frost & Sullivan

Haemostasis IVD market is mainly driven by the fast growth in number of surgeries

Clotting disorders can cause a dangerous amount of bleeding or clotting. Hemostasis analysis is useful in monitoring people who take medications that affect clotting ability. Hemostasis analysis is also sometimes recommended before surgery. As the rising acceptance from clinical laboratory and increasing surgery volume, China hemostasis analysis IVD market reached Rmb3.1bn in 2017, growing from Rmb1.3bn in 2013 and is expected to grow to Rmb8.6bn in 2022.

Hemostasis involves studying the functions of blood coagulation (stopping bleeding), preventing blood from clotting too much within blood vessels, and fibrinolysis, which dissolves clots. Hemostasis testing is performed to diagnose hemorrhagic diseases (such as hemophilia) and thrombotic disease, to help decide methods of treatment, for monitoring, and to help diagnose the risk of bleeding or blood clotting prior to surgery.

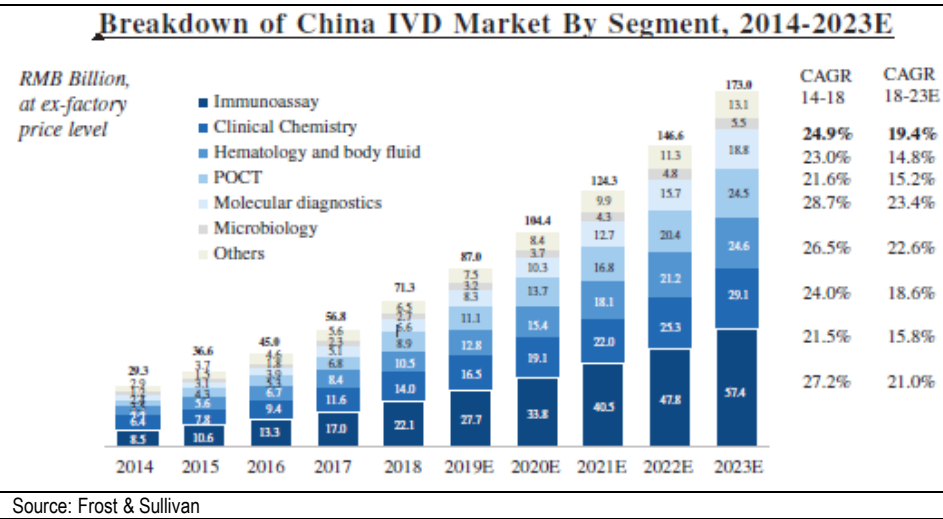
Figure 31: Number of surgeries in China have been growing at a CAGR of 10.1% during 2007-2017

Source: Wind

Figure 32: Domestic brands in hemostasis tests

Source: Frost & Sullivan

Figure 33: Immunoassay, POCT and Molecular diagnostics are the most fast growing sub-segments while hematology and body fluid are growing at the same pace with overall market



Impact from two invoice system policy

The “Two Invoice System” for drug procurements

As one of the measures for the PRC healthcare system reform, In order to implement the Guiding Opinions on Improving the Centralised Drug Procurement for Public Hospitals of the General Office of the State Council (《国务院办公厅关于完善公立医院药品集中采购工作的指导意见》), the 2016 List of Major Tasks in Furtherance of the Healthcare and Pharmaceutical Reforms (《深化医药卫生体制改革 2016 年重点工作任务》) issued by the General Office of the State Council on 21 April 2016 required that the “two invoice system” (两票制) (i.e. one invoice between the pharmaceutical manufacturer and the pharmaceutical distributor, and the other invoice between the pharmaceutical distributor and the hospital) should be promoted in pilot provinces involved in the comprehensive medical reform program.

On 26 December 2016, the Implementing Opinions on Carrying Out the Two Invoice System for Drug Procurement among Public Medical Institutions (for Trial Implementation) (《关于在公立医疗机构药品采购中推行 “两票制” 的实施意见(试行)》) (the “Circular”) was issued by eight central government departments, including the NMPA. The Circular requires public medical institutions to gradually implement the “two invoice system” for drug procurements and encourages other medical institutions to promote the same so that the system can be widely promoted nationwide in 2018.

The “Two Invoice System” for medical consumables is relatively lagging behind

While the implementation of “Two Invoice System” for drugs is successfully carried out nationwide, which for medical consumables is lagging behind. On 5 March 2018, the Ministry of Finance, the NDRC, the Ministry of Human Resources and Social Security and State Administration of Traditional Chinese Medicine issued the Notice on Consolidating the Achievements of Cancelling Drug Markups and Deepening Comprehensive Reforms in Public Hospitals (《关于巩固破除以药补医成果持续深化公立医院综合改革的通知》), which stipulates the implementation of the centralized purchase of high value medical consumables, and that the “Two Invoice System” in relation to high value medical consumables shall be gradually implemented.

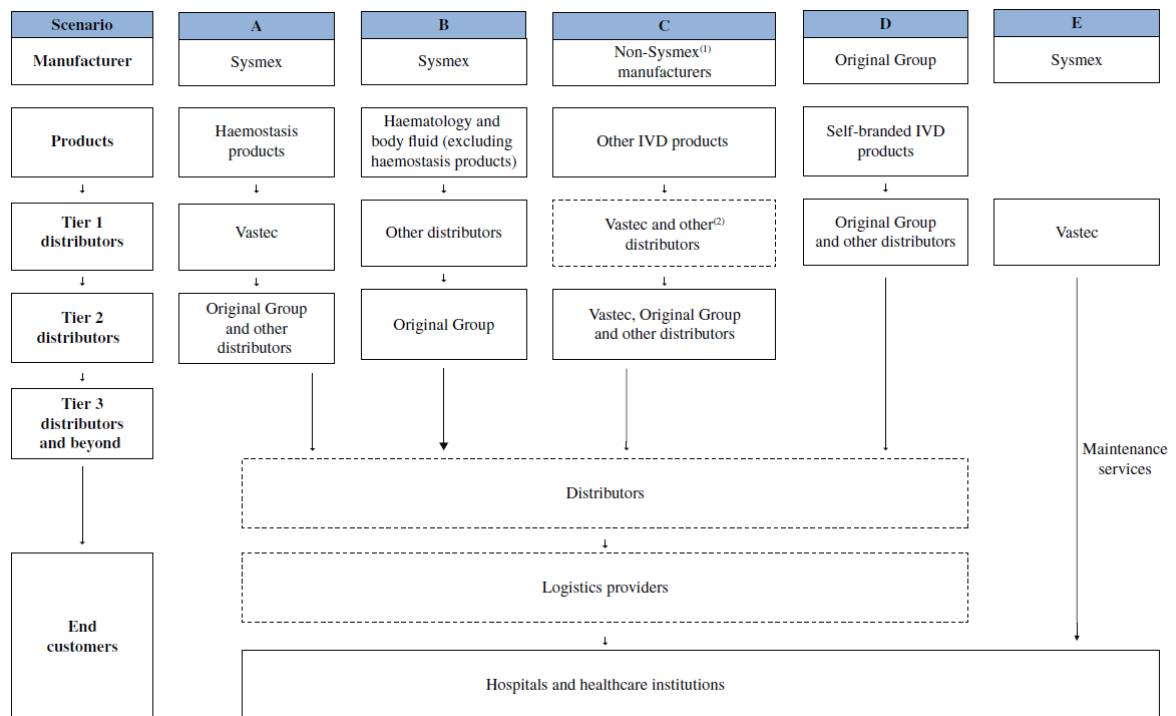
Several provincial government have subsequently issued guidance on the implementation of “Two Invoice System” for high-value medical consumables.

15-16% of IVD’s existing business may be affected by “Two Invoice System”

While the potential implementation of the “Two Invoice System” and centralized procurement policy may have a profound impact on IVD Medical’s long term business, we estimate that 15-16% of IVD’s existing revenue may be affected by the potential “Two Invoice System”.

Difficulties in implementing “Centralized Purchasing” for IVD products

Currently, the medical consumables are purchased directly by hospitals. With the establishing of provincial Healthcare Security Bureau, the centralized purchasing at provincial level is an unavoidable trend. However, unlike drugs, implementing such policy for IVD products has technical difficulties – the IVD analysers normally have replacement cycle; before the IVD analyser can be replaced, each analyser requires specific type/brand of reagents that are not replaceable by other brands. The analyser manufacturers are not responsible for any risks arising from using other reagents. This makes the quality consistency evaluation applied to generic drugs and subsequent centralized procurement difficult for IVD products in the short term.

Figure 34: Illustration IVD Medical's different business flows

Source: Company data

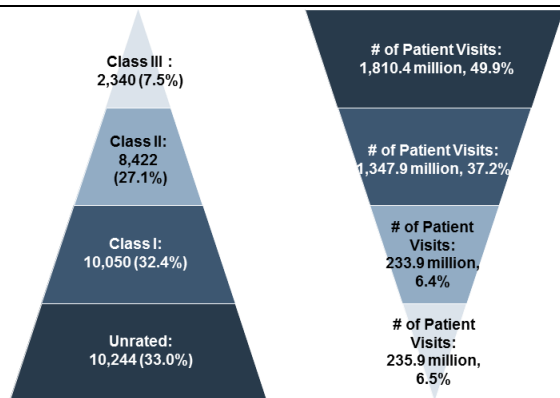
Figure 35: Revenue breakdown by different business lines and potential impact from the two-invoice system

Rmb m	A	B	C	D	E
	Distribution of Sysmex' haemostasis products	Distribution of Sysmex' haematology and body fluid (excluding haemostasis) products	Other distribution business (as non-tier 1 distributor for other brand or Sysmex' non-haematology and body fluid products)	Self-branded IVD products	Maintenance services
Likelihood of being affected	Unlikely	Maybe	Maybe	Unlikely	Unlikely
Vastec					
2016	1,282	0.0	99.0	0	0
2017	1,443	0.0	85.1	0	67.6
2018	1,633	2.0	96.8	0	123.1
Original Group					
2016	105.8	22.7	154.6	7.3	0
2017	135.6	38.6	145.2	18.9	0
2018	156.2	62.8	189.4	5.2	0
Estimated combined revenue					
2016	1,282	22.7	253.6	7.3	0.0
2017	1,443	38.6	230.3	18.9	67.6
2018	1,633	64.8	286.2	5.2	123.1
Pro forma group revenue					
2016	1,595	1,595	1,595	1,595	1,595
2017	1,837	1,837	1,837	1,837	1,837
2018	2,153	2,153	2,153	2,153	2,153
% of Vastec's revenue					
2016	92.8%	0.0%	7.2%	0%	0.0%
2017	90.4%	0.0%	5.3%	0%	4.2%
2018	88.1%	0.1%	5.2%	0%	6.6%
% of Original Group revenue					
2016	36.4%	7.8%	53.2%	2.50%	0%
2017	40.0%	11.4%	42.9%	5.60%	0%
2018	37.8%	15.2%	45.8%	1.30%	0%
% of pro forma group revenue					
2016	80.4%	1.4%	15.9%	0.5%	0.0%
2017	78.5%	2.1%	12.5%	1.0%	3.7%
2018	75.8%	3.0%	13.3%	0.2%	5.7%

Source: Company data, AMTD Research

The localization wave driven by the hierarchical healthcare system

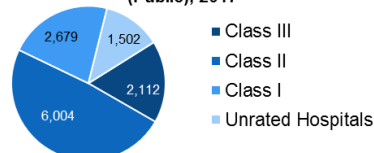
Figure 36: Public's preference for Class III hospitals leads to the severe inversion of medical resource and diagnosis demand



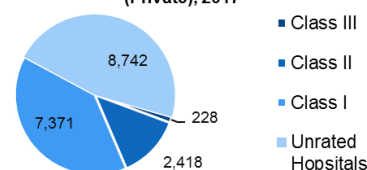
Source: NHFPC, Frost & Sullivan

Figure 37: The number of Class III, Class II, Class I and unrated public and private hospitals in China, 2017

The Number of Class III, Class II, Class I and Unrated Hospitals (Public), 2017



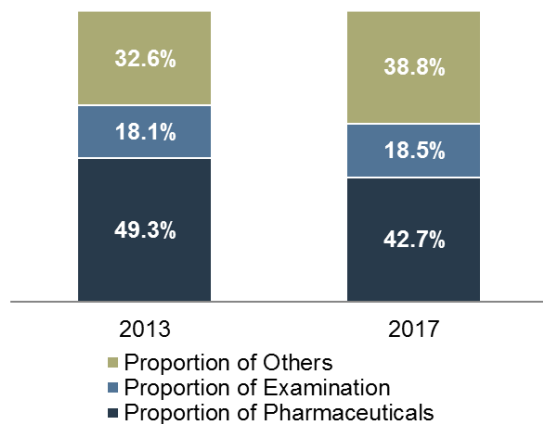
The Number of Class III, Class II, Class I and Unrated Hospitals (Private), 2017



Source: Frost & Sullivan

Figure 38: While pharmaceuticals' share in spending is declining, examination spending and others are rising...

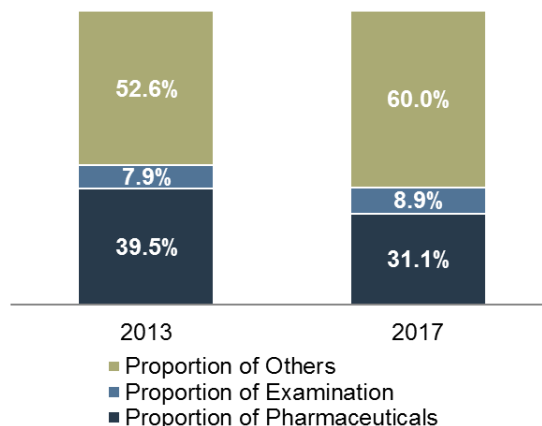
Composition of Average Outpatient Spending in Hospital, 2013 & 2017



Source: NBSC, 2017 Statistics Yearbook of China, Frost & Sullivan

Figure 39: ...same for inpatient spending

Composition of Average Inpatient Spending in Hospital, 2013 & 2017



Source: NBSC, 2017 Statistics Yearbook of China, Frost & Sullivan

Laboratory solution services

Solution services significantly increase hospital's cost efficiency

According to Frost & Sullivan, the IVD solution services are at a rapid pace of development within the IVD industry. The provision of solution services to hospitals is a recent and unique business model in the PRC market. According to Frost & Sullivan, with the continuous increase in IVD testing categories, hospitals' management cost for procuring IVD products has been increasing. Facing immense cost-cutting pressure, more and more hospitals are willing to hand over the management of inventory, logistics and procurement of IVD products to distributors with solution services capabilities, to increase cost efficiency. Specifically, the solution services help to improve the procurement efficiency and equipment configuration of medical institutions, reduce the operating costs of medical institutions, and provide them with various value-added services.

Currently, IVD Medical provides solution services to the clinical laboratories of hospitals for centralised procurement through Dacheng. As at the Latest Practicable Date, Dacheng has entered into cooperation agreements with three hospitals. The Company began to provide solution services to hospitals in the PRC since 2013. By being the general supplier of their clinical laboratory department, the Company participates in the design of laboratory layout, provide centralised procurement of IVD products, conduct real-time inventory monitoring and provide other after-sale services to clinical laboratories.

Solution services ideal for the "two invoice system"

China has introduced the "two invoice system" in order to optimise the purchasing and selling process of medical products. According to the State Council, the "two invoice system" only allows a maximum of two invoices between a manufacturer and hospital – each manufacturer will sell to a distributor and that distributor will sell directly to hospitals, eliminating multi-tiered distribution. Given the possible consequences of the national implementation of the "two invoice system" in the future and the solution services model meets the "two invoice system" requirements, there is a trend that more and more hospitals started to adopt a centralised procurement model. As a result, distributors like IVD Medical with the ability to provide broad network coverage and such value-added services can become highly competitive. The Company's sales revenue generated from solution services increased by approximately 15.6% from approximately Rmb79.9mn for the year ended 31 December 2016 to approximately Rmb92.4mn for the year ended 31 December 2017 mainly as a result of the increased demand from the hospitals.

A long-term stable income stream

The cooperation agreements with hospitals for providing solution services is generally for a longer period. For example, IVD Medical's solution services contract is generally for a period of five years. The partnership between the solution services providers and hospitals is stable and will keep generating stable profits on a continuous basis during the contract period. In addition, the solution services model increases the provider's bargaining power and helps stretch payment terms.

Figure 40: Key principal terms of Dacheng's solution service agreements

Duration	:	Typically a term of around five years
Renewal	:	The cooperation agreements are not automatically renewed upon expiration of the term
Services to be rendered	:	Dacheng assists hospitals to establish clinical laboratory logistic centres, provides centralised procurement of IVD products, and provides after-sales service and technical support etc.
Credit and payment terms	:	Around 30 days
Right of termination	:	If the cooperation agreement is not in compliance with the national laws, regulations or policies or the quality of products, price or after-sale services provided by Dacheng cannot meet the requirements stipulated in the agreement, customer may unilaterally terminate the cooperation agreement

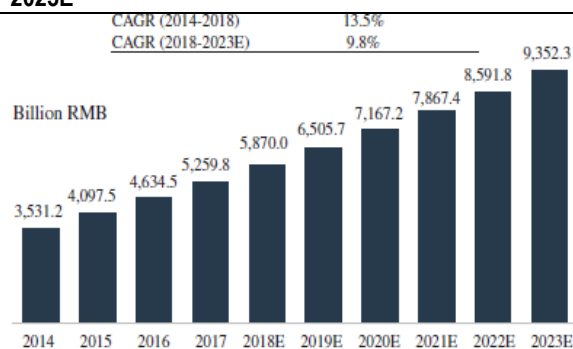
Source: Company data

China IVD industry overview

Rising demand for medical device in China

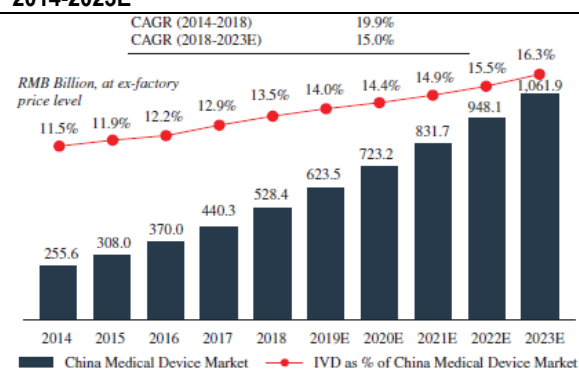
China's total healthcare expenditure has been growing steadily. According to WHO, NBS, OECD and Frost & Sullivan, China ranked second globally in terms of total healthcare expenditure in 2017. Specifically, the size of China medical device market in terms of sales revenue was approximately Rmb528.4bn in 2018. The demand of medical device market in China is expected to continue to increase given the accelerated ageing population and increasing healthcare investment from the government.

Figure 41: Total healthcare expenditure of China, 2014-2023E



Source: NHFPC, WHO, Frost & Sullivan Report

Figure 42: Market size of China medical device market, 2014-2023E



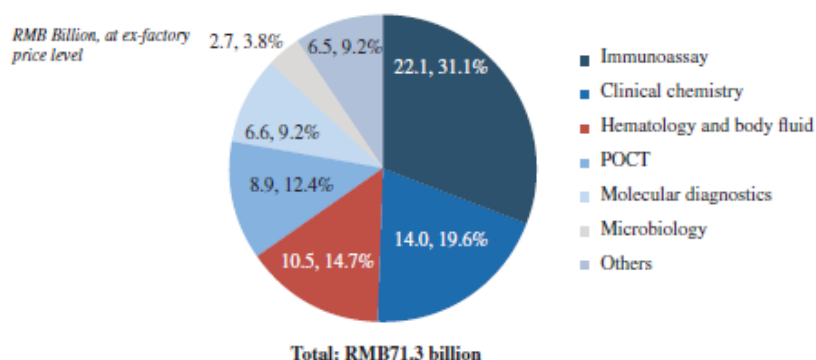
Source: China Medical Pharmaceutical Material Association, Frost & Sullivan

IVD market ranked second in China medical device segment

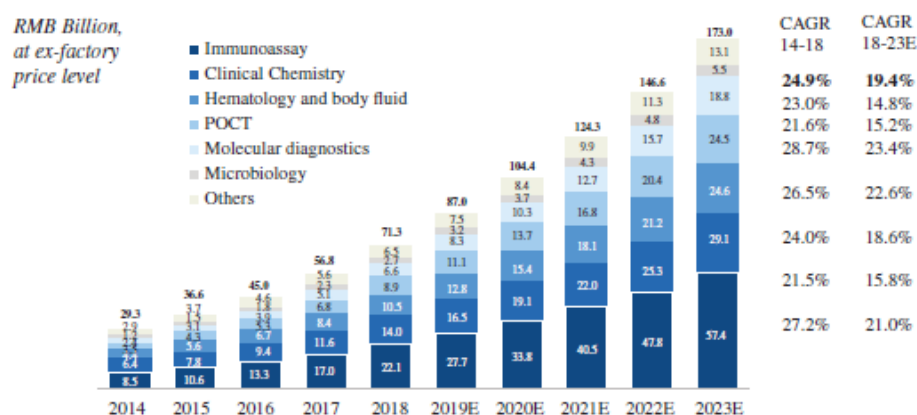
IVD is used to diagnose, monitor, screen and assess predispositions to diseases. Advantages of using IVD include reducing hospital stays and providing more precise and scientific guidance on clinical decisions.

IVD is the second largest segment in China medical device market with a share of 13.5% in terms of sales revenue in 2018. China IVD market can be divided into six major segments based on testing principles: haematology and body fluid, clinical chemistry, immunoassay, molecular, microbiology and POCT. Haematology and body fluid test includes haemostasis analysis and urinalysis and it ranked third in the China IVD market by revenue in 2018.

Figure 43: Breakdown of China IVD market, 2018



Source: Frost & Sullivan Report

Figure 44: Breakdown of the China IVD market by segment, 2014-2023E

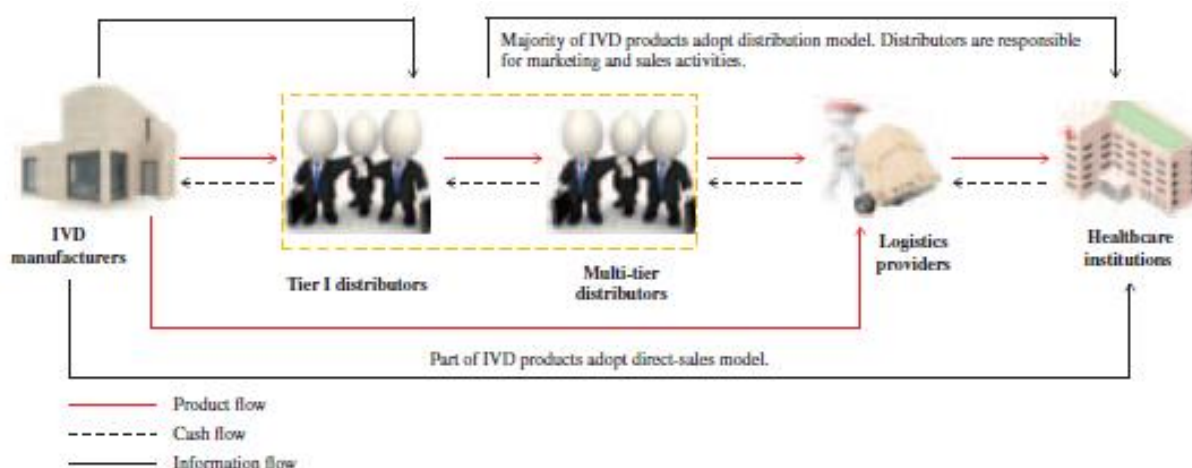
Source: Frost & Sullivan Report

Growth drivers of the IVD market in China include ageing population and increasing disposable income, continuous technological innovation, strong policy support, and hierarchical healthcare system and medical partnership.

We also identify following trends of future China IVD market: continuous market growth, hospitals' increasingly reliance on IVD services, expanding reach of domestic manufacturers, prevalence of the centralized procurement business, and increasing independent commercial lab outsourcing services.

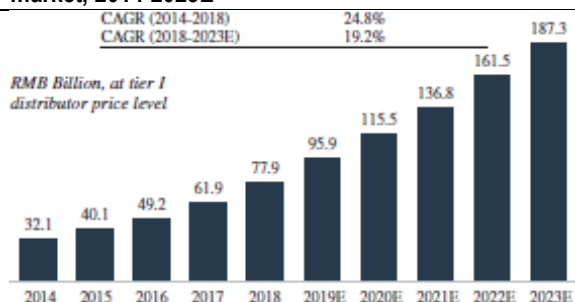
Distribution model dominating China IVD market

The current China IVD market has a multi-tier distribution structure. The distribution model is the dominate business model in respect of the IVD industry in China. In 2018, approximately 85% of the IVD market by revenue adopt the distribution model where distributors are also responsible for marketing and sales activities with end customers.

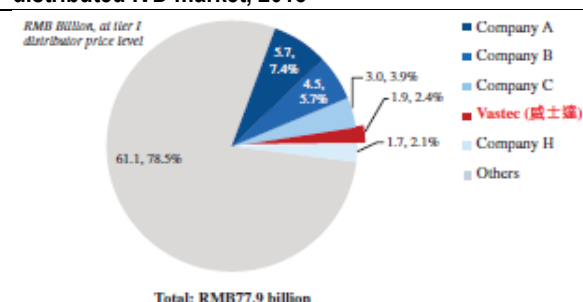
Figure 45: Value chain of IVD industry in China

Source: Frost & Sullivan Report

According to Frost & Sullivan Report, the top five tier 1 IVD distributors are Company A, Company B, Company C, Vastec and Company D. Vastec ranked fourth among all tier 1 distributors in China, with a sales revenue of approximately Rmb1.9bn in 2018.

Figure 46: Market size of China tier 1 distributed IVD market, 2014-2023E

Source: Frost & Sullivan Report

Figure 47: Competitive landscape of China tier 1 distributed IVD market, 2018

Source: Frost & Sullivan Report

Increasing concentration in China IVD market brought by the “two invoice system”

With the upcoming nationwide application of the “two invoice system”, we believe the concentration rate in China IVD market will increase significantly. According to the Frost & Sullivan Report, if the “two invoice system” is launched, it is expected that (i) the distribution value chain will be compressed into one single layer; (ii) manufacturers will only be allowed to utilize one layer of distributors which presents a serious challenge for traditional lower-tier distributors; and (iii) larger or leading distributors will look to acquire regional distributors to build up their account and regional coverage. As a result, lower-tier distributors are likely to be squeezed out of the market by such consolidating competition.

IVD Medical focusing on haematology and body fluid segment

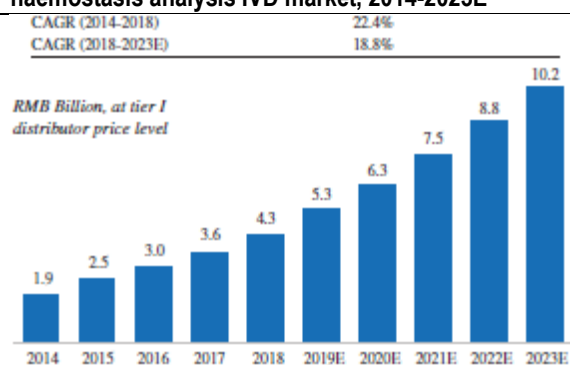
Haematology and body fluid tests refers to the biochemical analysis of body fluids. It uses chemical reactions to determine the levels of various chemical compounds in bodily fluids. Several simple chemical tests are used to detect and quantify different compounds in blood and urine, the most commonly tested specimens in clinical chemistry. The diagnosis items majorly include urinalysis, hematology, haemostasis and erythrocyte sedimentation rate analysis.

- 1) **Urinalysis:** a urinalysis can help doctor detect problems that can be indicated by urine. For example, the microscopic exam is to test the abnormalities in red or white blood cells which can indicate signs of infections in kidney disease, bladder cancer, or a blood disorder and crystals can indicate stones in kidney.
- 2) **Haematology:** haematology tests include laboratory assessments of blood formation and blood disorders. Some examples of these tests are: Full blood count - A count of the total number of red blood cells, white blood cells and platelets present in blood; assessment of granulocytosis; Iron status and anemias are assessed using tests such as serum ferritin, vitamin B12 and folate levels.
- 3) **Haemostasis:** haemostasis tests measure the blood's ability to clot and the time it takes to clot. Haemostasis tests can help doctor assess patients' risk of excessive bleeding or developing clots (thrombosis) somewhere in blood vessels.
- 4) **ESR:** ESR is the rate at which red blood cells sediment in a period of time. It is a non-specific measure to detect the presence of inflammation caused by one or more conditions such as infections, tumors or autoimmune diseases.

Vastec NO.1 market share in China haemostasis analysis IVD market

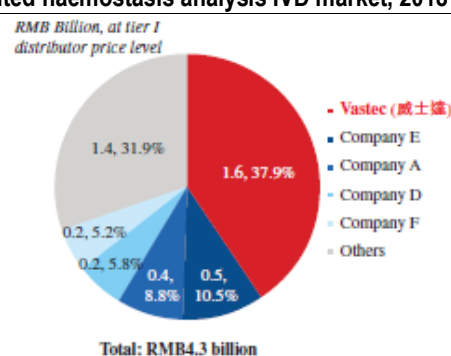
China haemostasis analysis IVD market is centralized and dominated by a few overseas brand manufacturers including Sysmex, Stago and Werfen with a market share of approximately 43.9%, 24.2% and 17.0%, respectively by revenue in 2018. Vastec which distributes Sysmex haemostasis products has the largest market share of the China tier 1 distributed haemostasis analysis IVD market in 2018.

Figure 48: Market size of China tier 1 distributed haemostasis analysis IVD market, 2014-2023E



Source: Frost & Sullivan Report

Figure 49: Competitive landscape of China tier 1 distributed haemostasis analysis IVD market, 2018



Source: Frost & Sullivan Report

As for China urinalysis IVD market, local brand manufactures in general are the market leaders in China urinalysis IVD market by revenue. The top three manufactures in the China urinalysis IVD market are Urit, Sysmex and Dirui.

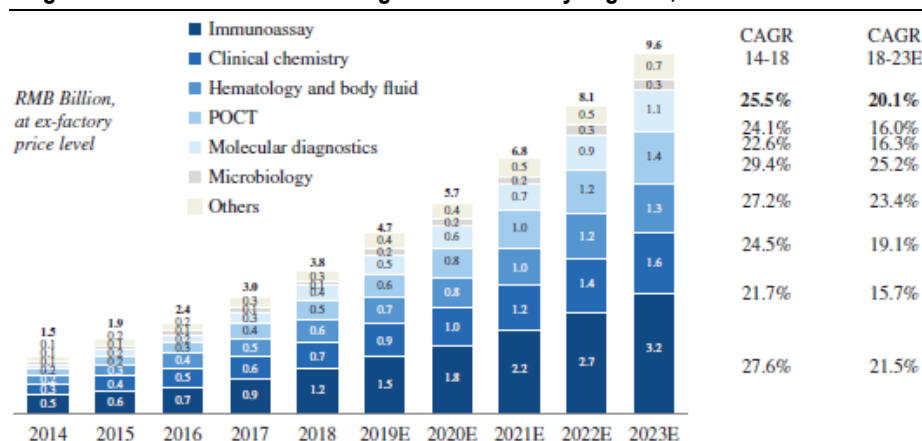
Figure 50: Market size of the China urinalysis IVD market, 2014-2023E



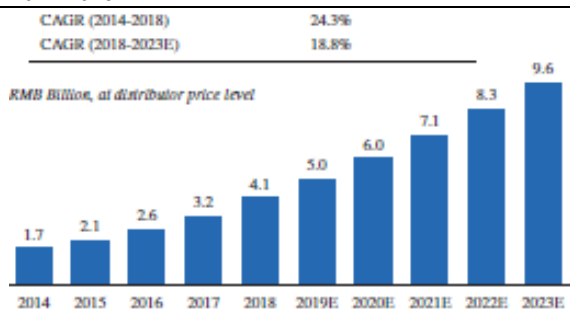
Source: Frost & Sullivan Report

Dacheng ranked third among top IVD distributors in Shanghai

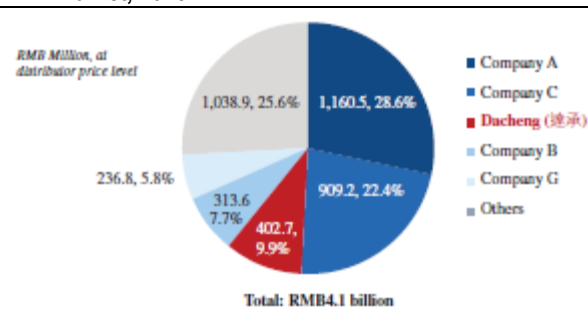
Shanghai is one of the largest IVD markets in China, with a market size in terms of sales revenue of approximately Rmb3.8bn in 2018. Haematology and body fluid analysis segment ranked third in Shanghai in 2018. Dacheng is among the top three IVD distributors in Shanghai.

Figure 51: Breakdown of the Shanghai IVD market by segment, 2014-2023E

Source: Frost & Sullivan Report

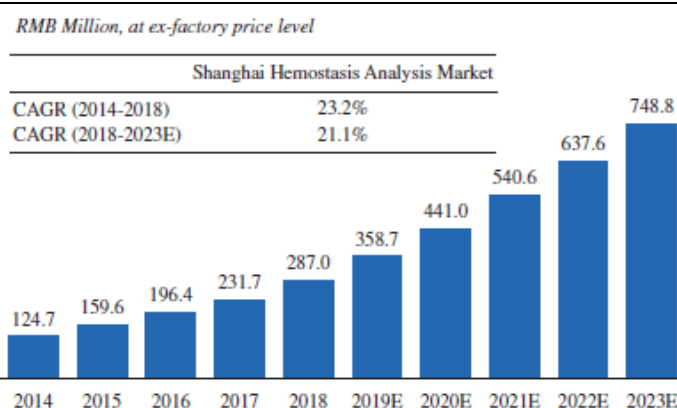
Figure 52: Market size of Shanghai distributed IVD market, 2014-2023E

Source: Frost & Sullivan Report

Figure 53: Competitive landscape of Shanghai distributed IVD market, 2018

Source: Frost & Sullivan Report

As for Shanghai haemostasis analysis IVD market, the top three manufacturers are Sysmex, Stago and Werfen, with a market share of approximately 54.4%, 22.6% and 17.0%, respectively, by revenue in 2018. Major growth drivers of the Shanghai IVD market include increasing patient visits, improving affordability and abundant medical resources.

Figure 54: Market size of the Shanghai haemostasis analysis IVD market, 2014-2023E

Source: Frost & Sullivan Report

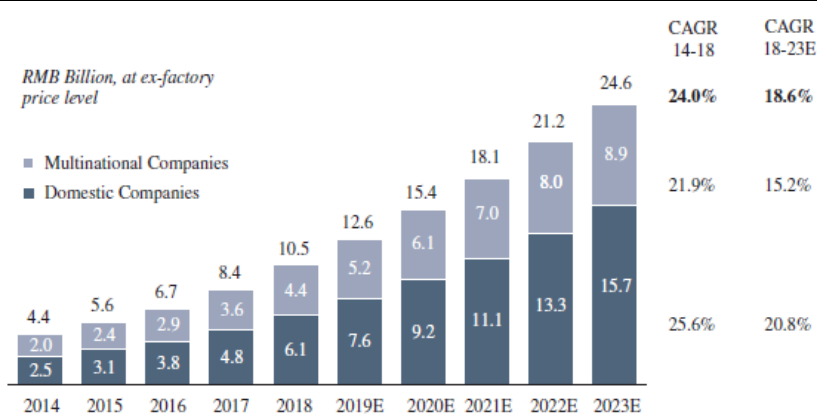
Domestic substitution is the trend in China medical device market

Domestic substitution is one of the future trends of China medical device market. With the policy support, local medical device companies leverage low manufacturing cost to compete with MNC counterparts and gain increasing market share from them. With pricing advantage, domestic manufacturers have obtained increasing share in lower-end market such as low-level hospitals and primary healthcare institutions. With further investment on R&D and favorable policies on domestic substitution, local IVD players will expand their product portfolio and extend market coverage to premium end users such as high level hospitals. Currently, such domestic substitution majorly is observed in low-end medical device market with low added value.

Domestic brands to grow faster in the haematology and body fluid IVD market

The haematology and body fluid IVD market is fragmented in China, and more than half domestic products, of which market increased with the CAGR of 25.6% during 2014 to 2018, and is expected to maintain a steady growth to Rmb15.7bn in 2023 with the CAGR of 20.8%. Compared with domestic haematology IVD market, the MNC haematology IVD market grew with the CGAR of 21.9% from 2014 to 2018, and with the growth slow down, the market is estimated to reach Rmb8.9bn in 2023, representing the CAGR of 15.2%.

Figure 55: Breakdown of China haematology and body fluid IVD market by MNC and domestic companies, 2014-2023E

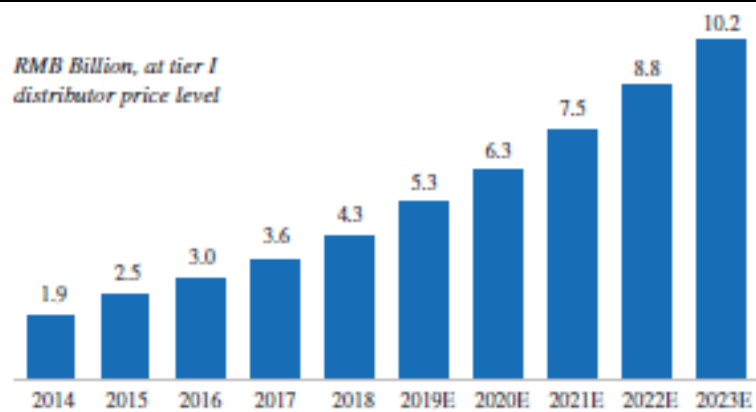


Source: Frost & Sullivan Report

Major domestic haemostasis brands

Haemostasis is a fast-developing IVD segment in China in recent years. Based on tier I distribution, China hemostasis analysis IVD market has reached Rmb4.3bn in 2018. Currently approximately more than 90% of the market share are dominated by multinational brands in haemostasis market. Leading market players in haemostasis include Sysmex, Werfen and Stago. As for domestic brands, Precil (controlled by Mindray), Succeder, BSBE and Shanghai Sun Biotech are leading players in the market.

Figure 56: Historical and forecasted market size of China tier I distributed hemostasis analysis IVD market, 2014-2023E



Source: Frost & Sullivan Report

Figure 57: Haemostasis analysers from major domestic haemostasis brands

Mindray C3510**Succeeder SF-8200****BSBE Coatron 5000****Rayto RAC-1800**

UP 1500



UP 3000



UP 5000



UP 5500

Shanghai Sun UP series

XL1000系列



XL1000e系列



XL3200系列



XL3000系列

Zonci XL series

Source: Mindray, Succeeder, Rayto, Shanghai Sun Biotech, Zonci

Risk analysis

Heavy reliance on the relationship with Sysmex

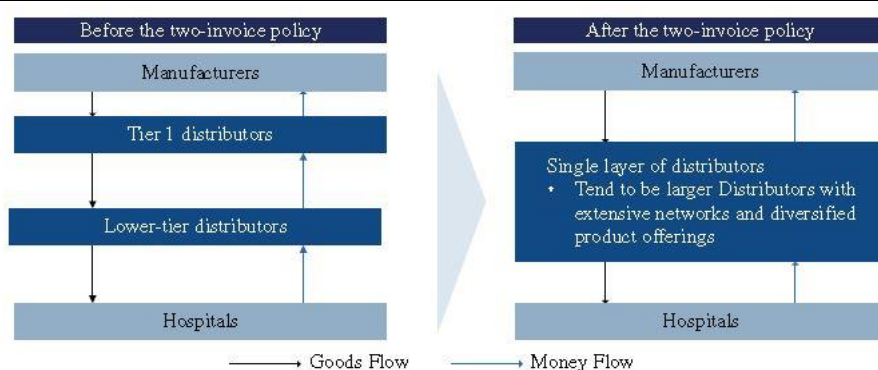
Sysmex' haemostasis and urinalysis products are two of IVD Medical's most sold products. During the Track Record Period, the Company relied heavily on Sysmex' brand recognition and reputation in the sales and marketing of its products. Any change of Sysmex' existing sales or marketing strategy in the PRC might adversely impact IVD Medical's business and results of operations.

Both Vastec's and the Original Group's business depend on the stable supply of haemostasis and urinalysis products from Sysmex. Dacheng has been the regional distributor of Sysmex' haemostasis products in Shanghai for the past six years. It was further engaged as a regional distributor of Sysmex' urinalysis products in Shanghai in April 2016. For the years ended 31 December 2016 and 2017 and the nine months ended 30 September 2018, revenue generated from the sales of Sysmex' haemostasis and urinalysis products represented approximately 45.4%, 54.6% and 54.4% of the total revenue of the Original Group's distribution business. Further, Vastec has been a national distributor of Sysmex' haemostasis products with exclusive distribution rights in the PRC since 1997. For the years ended 31 December 2016 and 2017 and the nine months ended 30 September 2018, revenue generated from the sales of Sysmex' haemostasis products represented approximately 92.8%, 94.4% and 95.0% of the total revenue of Vastec's distribution.

Potential impact of the "two invoice system"

Shaanxi, Fujian, Qinghai, Liaoning, Heilongjiang, Tibet, Shanxi and one city in Jiangsu Province collectively known as "Applicable Provinces" have applied the "two invoice system" to the IVD product industry, including the IVD products IVD Medical distributes. It is uncertain whether and to what extent IVD Medical's business operation will be affected by the "two invoice system". During the Track Record Period, the Original Group's revenue generated from the Applicable Provinces were approximately Rmb4.6mn, Rmb9.0mn and Rmb10.6mn, respectively, representing approximately 1.6%, 2.7% and 3.8% of the total revenue of the Original Group for the same periods. Vastec's revenue generated from the Applicable Provinces were approximately Rmb265.5mn, Rmb316.6mn and Rmb235.4mn, respectively, representing approximately 19.2%, 19.8% and 19.0% of the total revenue of Vastec for the same periods.

Figure 58: Comparison of distribution chain of medical devices and medical consumables before and after the implementation of the "two invoice system"



Source: Company data

Self-branded products business may not grow as planned

According to Frost & Sullivan, with a pricing advantage, domestic IVD manufacturers have been capturing an increasing share in the lower-end markets such as low-level hospitals and primary healthcare institutions. With further investments in research and development and with policies favourable of domestic substitution, domestic IVD manufacturers will play a more important role in the future China IVD market.

IVD Medical engages in the research, development, manufacturing and sales of IVD analysers and reagents under its own brand. The Company's self-branded products business represented approximately 2.5%, 5.6% and 1.5% of the Original Group's total revenue for the years ended 31 December 2016 and 2017 and for the nine months ended 30 September 2018, respectively. As IVD Medical only commenced research and develop our self-branded IVD reagents in 2016, it may fail to adequately anticipate and meet market demands, which could harm its business and growth prospects.

Risks related to distributors

IVD Medical relies on its distributors to place its products into the market and failure to maintain relationship with its existing distributors, to engage new distributors or to effectively manage its distributors may materially and adversely affect its business, results of operations and financial condition. For the years ended 31 December 2016 and 2017 and the nine months ended 30 September 2018, sales to distributors accounted for approximately 20.9%, 31.8% and 30.3% of the Original Group's total revenue for the same periods, respectively. For the years ended 31 December 2016 and 2017 and the nine months ended 30 September 2018, sales to the distributors accounted for approximately 97.6%, 93.8% and 90.0% of the Vastec's total revenue for the same periods, respectively. As at 30 September 2018, the Original Group had 267 distributors and Vastec had 684 distributors in the PRC.

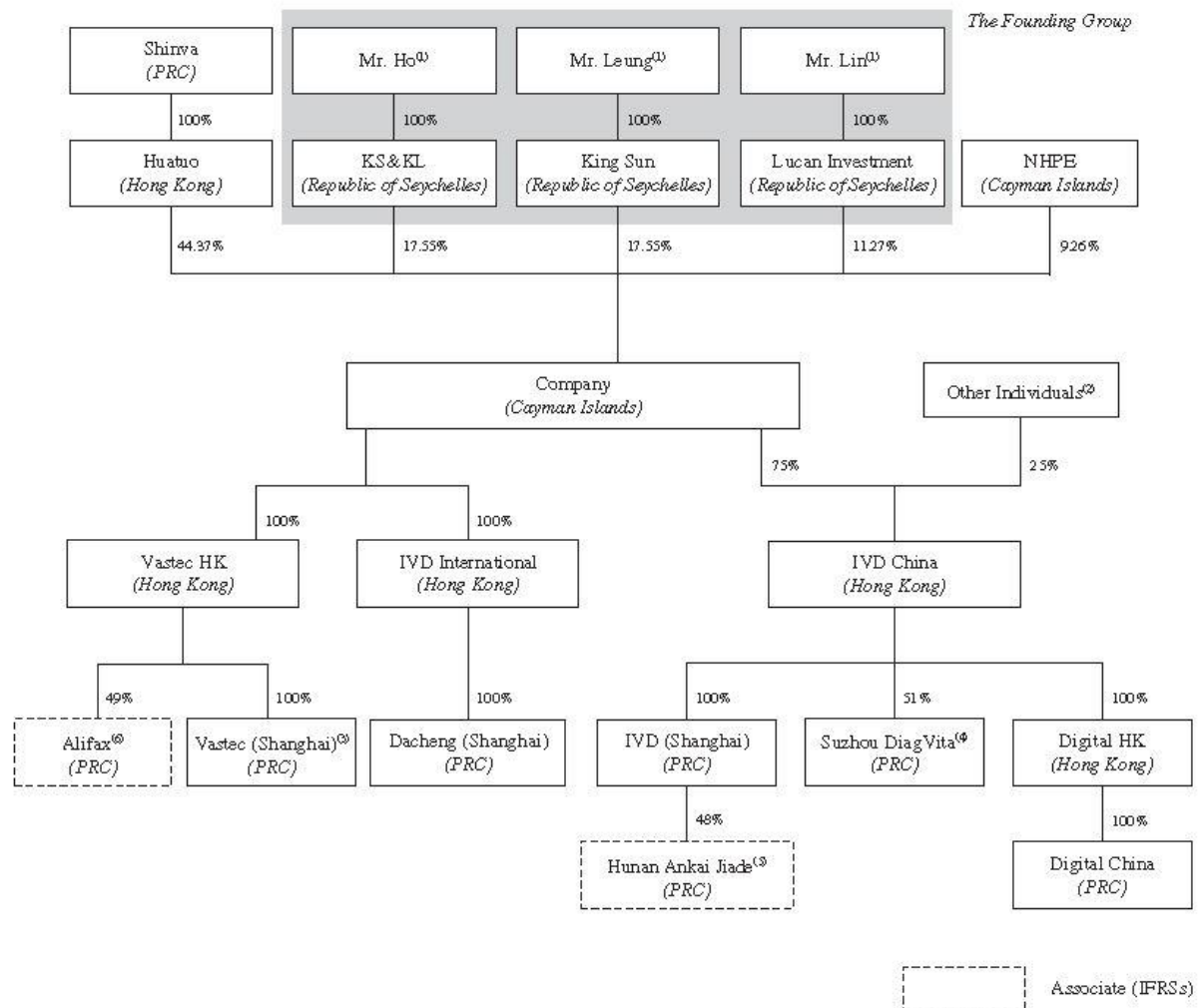
Appendix

IVD Medical's history can be traced back to 2009 when its co-founders and executive Directors Mr. Ho and Mr. Leung established IVD China and subsequently IVD (Shanghai) to engage in the research and development, sales and marketing of self-branded IVD products using their personal funds from previous business activities under Vastec HK. In 2011, Mr. Lin, Mr. Ho and Mr. Leung founded Dacheng (Shanghai) to engage in the distribution of IVD products with a focus on Shanghai IVD market using their personal funds from previous business activities or employment under Vastec HK. In December 2013, Mr. Ho and Mr. Leung introduced Huatuo as an industry investor and sold their 60% equity interest in Vastec HK to Huatuo. Mr. Ho and Mr. Leung, each being a director of Vastec HK, have been largely responsible for the management of the business operations of Vastec HK since its establishment. As part of the Reorganisation, Mr. Ho and Mr. Leung transferred their remaining 40% equity interest in Vastec HK to the Company, and Vastec HK became an associate of the Company in May 2016. With a view to further strengthening its distribution capability and sales network, the Company completed the acquisition of 60% equity interest in Vastec HK from Huatuo in January 2019, and Vastec HK has since then become its wholly-owned subsidiary.

Figure 59: Key milestones in the Company's Business

1993	<ul style="list-style-type: none"> Vastec HK was incorporated in Hong Kong
1996	<ul style="list-style-type: none"> Vastec HK established a representative office in Beijing
1997	<ul style="list-style-type: none"> Vastec became the national distributor of Sysmex' haemostasis products with exclusive distribution rights in the PRC
2000	<ul style="list-style-type: none"> Vastec (Shanghai) was established by Vastec HK in the PRC
2009	<ul style="list-style-type: none"> IVD China was incorporated in Hong Kong
2010	<ul style="list-style-type: none"> IVD (Shanghai) was established by IVD China in the PRC
2011	<ul style="list-style-type: none"> Dacheng (Shanghai) was established in the PRC
2012	<ul style="list-style-type: none"> Dacheng began acting as a regional distributor of Sysmex' haemostasis products in Shanghai for Vastec
2014	<ul style="list-style-type: none"> Shinva, through Huatuo, acquired 60% of the issued share capital of Vastec HK
2015	<ul style="list-style-type: none"> Alifax was established in the PRC by Vastec HK and Alifax S.R.L as a joint venture
2016	<ul style="list-style-type: none"> The Company was incorporated in the Cayman Islands Dacheng was appointed as a regional distributor of Sysmex' urinalysis products in Shanghai
2019	<ul style="list-style-type: none"> Completion of the Acquisition whereby Vastec HK became a wholly-owned subsidiary of the Company

Source: Company data

Figure 60: Shareholding structure before listing

Source: Company data

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Overweight	Industry sector expected to outperform the market over the next 12 months
Neutral	Industry sector expected to perform in-line with the market over the next 12 months
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Stock Rating	
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Hold	Stock with potential return of -20% to +20% over the next 12 months
Sell	Stock with potential loss of over 20% over the next 12 months

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We, Michelle Li, Brian Li and Roy Wu, hereby certify that (i) all of the views expressed in this research report reflect accurately our personal views about the subject company or companies and its or their securities; and (ii) no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed by us in this research report, nor is it tied to any specific investment banking transactions performed by AMTD Global Markets Limited.

Firm Disclosure

AMTD Global Markets Limited has an investment banking relationship with IVD Medical Holding Limited and/or its affiliate(s) within the past 12 months.

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