

INVESTMENT ANALYSIS OF ADVANCED INFO SERVICE

13 December 2016

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Advanced Info Service ("AIS")

- One of three telecommunication service providers (AIS, Dtac, True) in Thailand. AIS is the largest, with 39bn subscribers, subscription market share of 46% and service revenue market share of 49% (as of 2Q2016). Dtac and True have about similar market shares.
- AIS generated revenue of Baht 155bn and earned net profit of Baht 39bn in 2015. Revenue is generated largely from the provision of mobile services to prepaid and postpaid subscribers. 85% of customers are prepaid subscribers. In 2015, AIS launched fixed broadband business, providing internet to households. Contribution from the new fixed broadband business is insignificant at present.
- Thailand's telecommunication market operates under a licensing regime. Operators bid and pay an upfront fee (to the regulator) for spectrum licences. In addition, over the life of the licence, operator pays 5.25% of service revenue. AIS's operating assets consist largely of licences and PPE.
- Substantial shareholders of AIS are Singtel (effective 32% stake and partially through Intouch) and Temasek (effective 8% stake through Intouch).

Investment Thesis

1. Are the long-term economic characteristics of the business attractive and can they be evaluated with some certainty?

Strong secular trend of digital technology and mobile phones playing a bigger role in our lives.

Of the three telcos in Thailand, AIS is the market leader with 49% share of industry revenue and likely enjoy economy-of-scale advantages. Entry into broadband business further strengthened AIS's competitive position.

Long-term, Thailand's mobile market offers the potential for AIS to convert prepaid subscribers to higher-ARPU postpaid subscribers, providing tailwind for earnings growth.

Subscriber and ARPU growth will depend on Thailand's political stability and economic growth. Household debt could however pose a risk to the economy. Thailand's household debt to GDP ratio exceeds 80% and half of household debt is consumption-related (credit-card, personal loans and auto loans).

2. Is management effective, rational, visionary and see itself owing a sense of duty to shareholders?

Singtel is a substantial shareholder, holding a sizeable effective stake of 32%. Singtel's presence as a strategic investor provides an additional layer of oversight over corporate governance, strategy, and operations and management effectiveness.

3. Over an extended period, can the business employ large amounts of incremental capital at very high rates of return?

Under the industry's new licensing regime, AIS's ROIC is projected to decline sharply from 28% in 2015A to 13% in 2017F. The sharp decrease is due to higher investment in operating assets, specifically in licences (aggressive bidding) and PPE (heavy capex for network expansion). While service revenue has expanded, the investment in licences and capex has not yield higher profits, as operators compete to attract subscribers to their new networks. Competition compressed ARPU and caused higher marketing spend. A larger network capacity also drove up network opex and staff costs.

Nonetheless, 13% is a healthy return. Assume that AIS's leading market share position will provide a competitive advantage to sustain higher-than-10% ROIC.

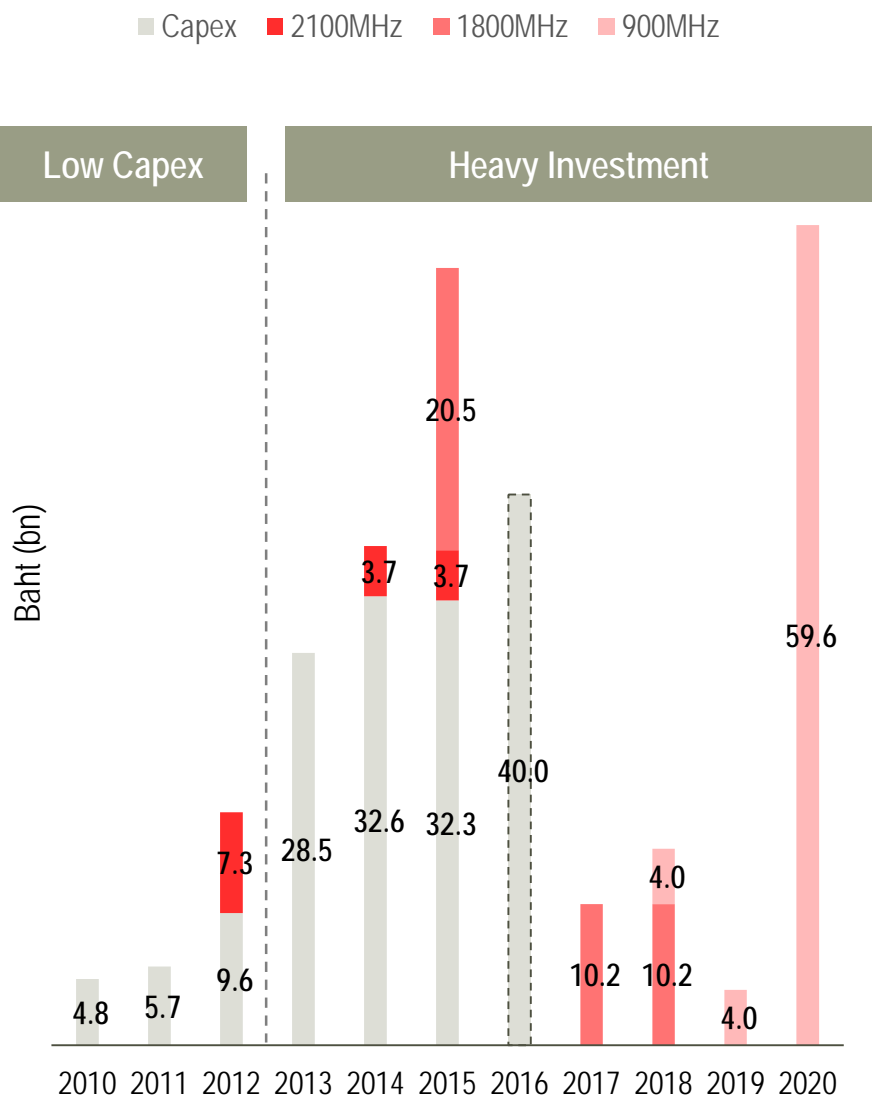
4. Is there a margin of safety in the share price?

Net profit for 2017 is forecasted to range from Baht 26.6bn (Base) to Baht 33.1bn (Optimistic). Assuming net profit to grow at 2% p.a. over the next 10 years (2018 – 2027), 10-year average net profit would range from Baht 29.7bn to Baht 36.9bn.

Based on earnings / dividend yield target of 9%, a safe entry price (based on 10-year average net profit of Baht 36.9bn) would be about Baht 135.

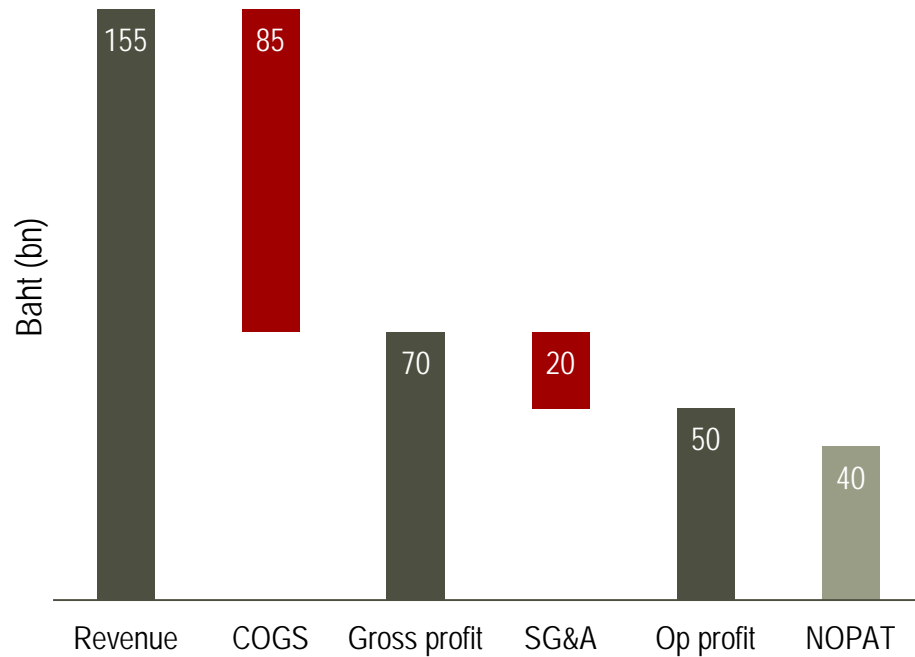
Change in industry structure brought about aggressive bidding for spectrum licences, heavy investment in capex and heightened competition among operators

Heavy Investment in Capex and Spectrum Licences



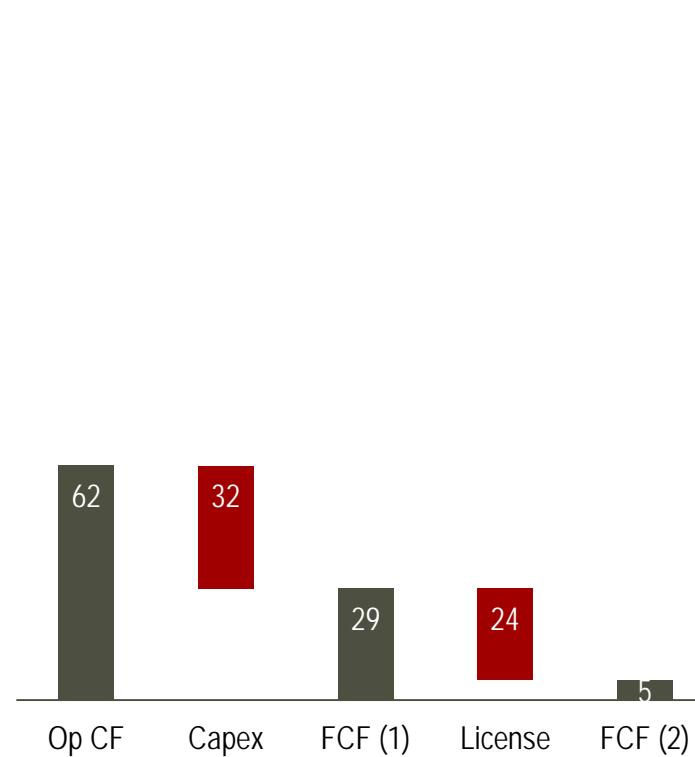
- Pre-2012, with BTO contracts approaching their expiry dates, operators delay investment until the 2.1GHz licenses are granted, resulting in a low Capex spend.
- Late-2012, auction of 3G 2.1GHz licences marked:
 - a fundamental change in industry structure from BTO based agreements with state-owned enterprises (used for more than 20 years) to a licensing regime under an independent regulatory body (absent from business conflict of interest); and
 - an expansion in network capacity for long-term growth for Thailand’s telecommunication sector (especially for data services).
- Post-2012, competition heightened as operators deployed their 3G networks, increased advertising activities and launched sales campaigns to promote 3G services. ARPU of all operators declined from heightened competition.
- Against this backdrop, there was a change of leadership (Chairman and CEO) at AIS. Newly appointed CEO, Somchai Lertsutiwong aims to transform AIS from a traditional Telecom Service Provider to be a Digital Life Service Provider by focusing on three key strategic elements: mobile services, fixed broadband services, and digital contents.
- In 2015, AIS launched fixed broadband business, providing internet to households, so-as-to better utilise the extensive amounts of high-quality fiber deployed nationwide under its 3G-2.1GHz network, defend its large subscriber base of mobile business and create a new revenue source.
- Late-2015, operators (including AIS) bided aggressively for the 1800MHz and 900MHz spectrum licences.
- In 2016, AIS responding to competition launched 4G services. Rollout of 4G network will continue in the next 1-3 years. AIS also launched Enterprise Cloud service, targetting corporates.

Earnings (FY2015)



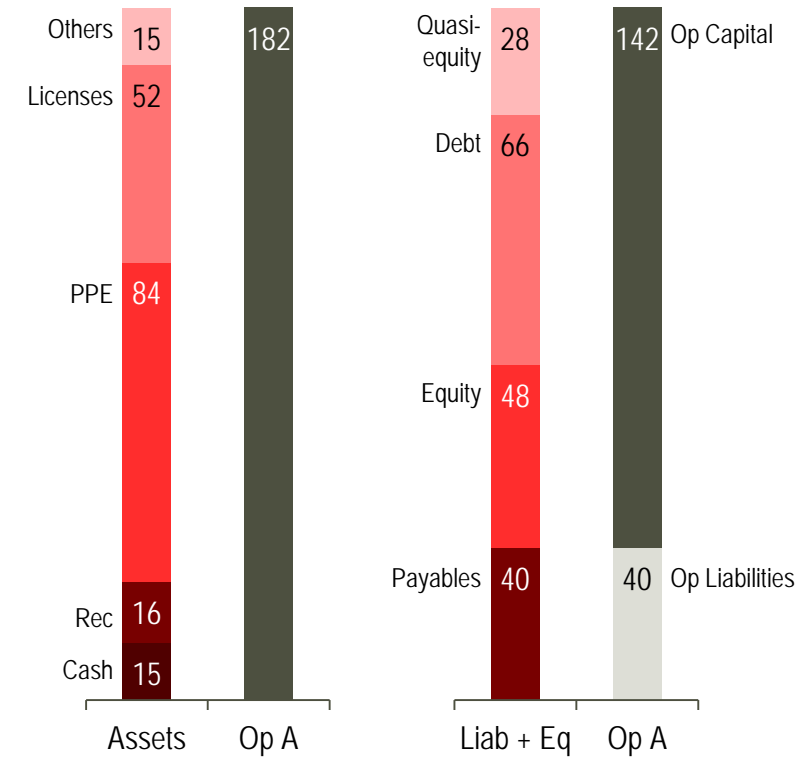
NOPAT / Revenue = 26%

Cash Flow (FY2015)



FCF (1) / Revenue = 19%

Operating Capital (Dec2015)



Revenue / Operating Assets = 0.85x

Op Assets / Op Capital = 1.28x

2015 ROIC = 28%

NOPAT
Revenue
26%

X

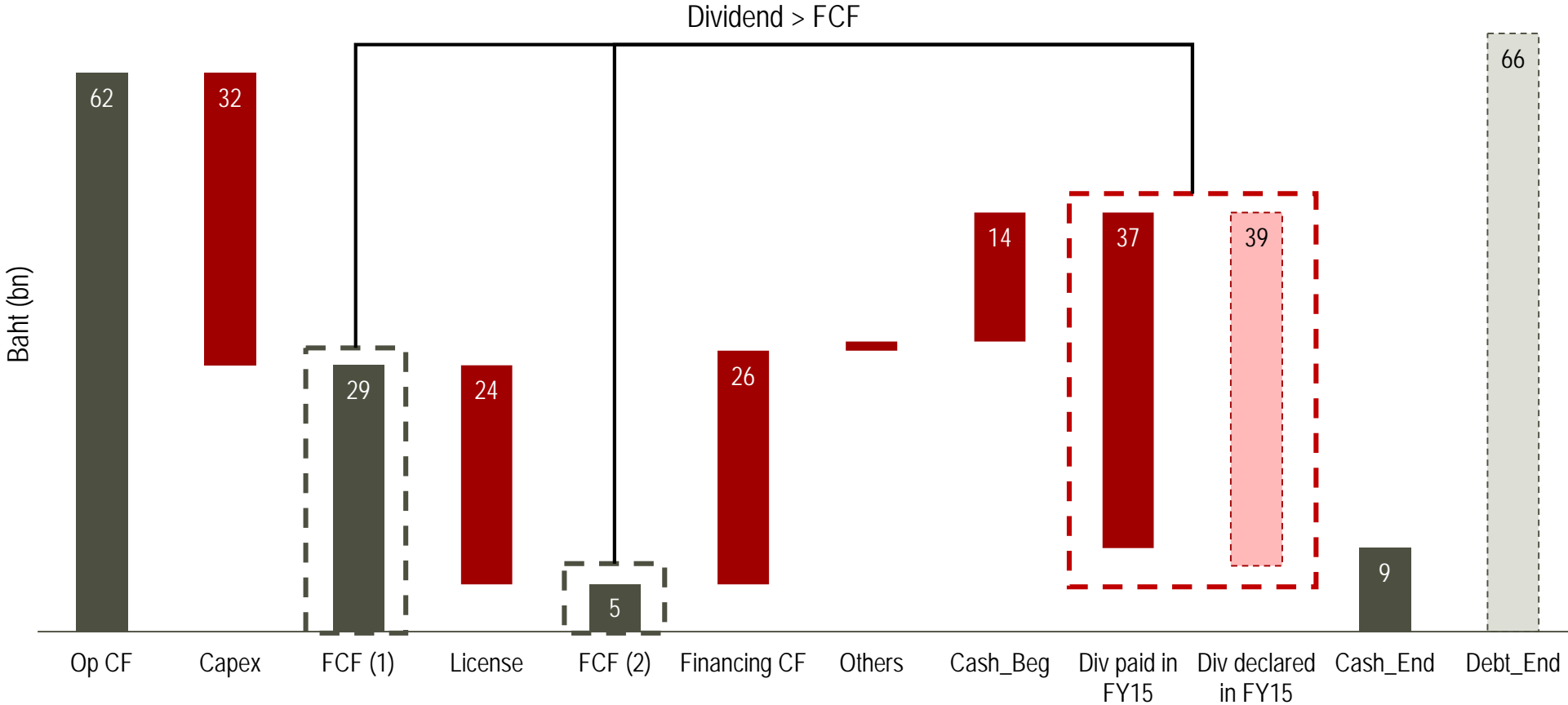
Revenue
Operating Assets
0.85x

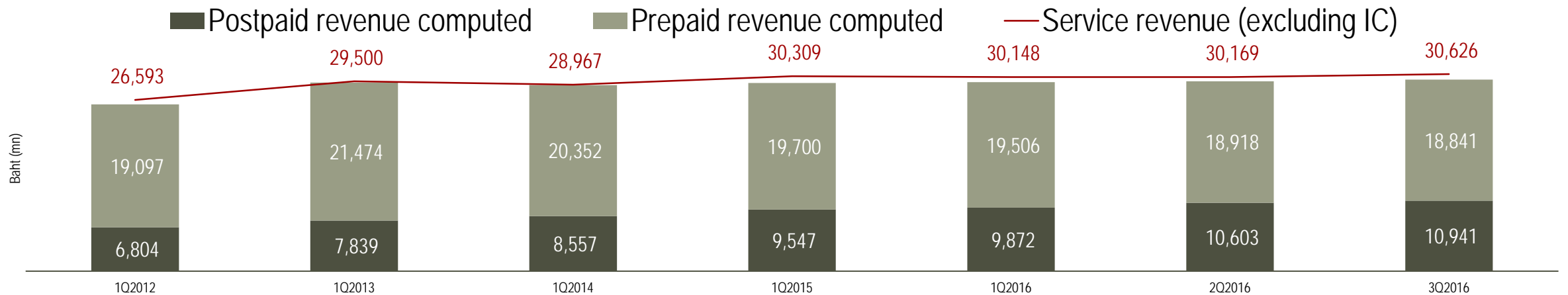
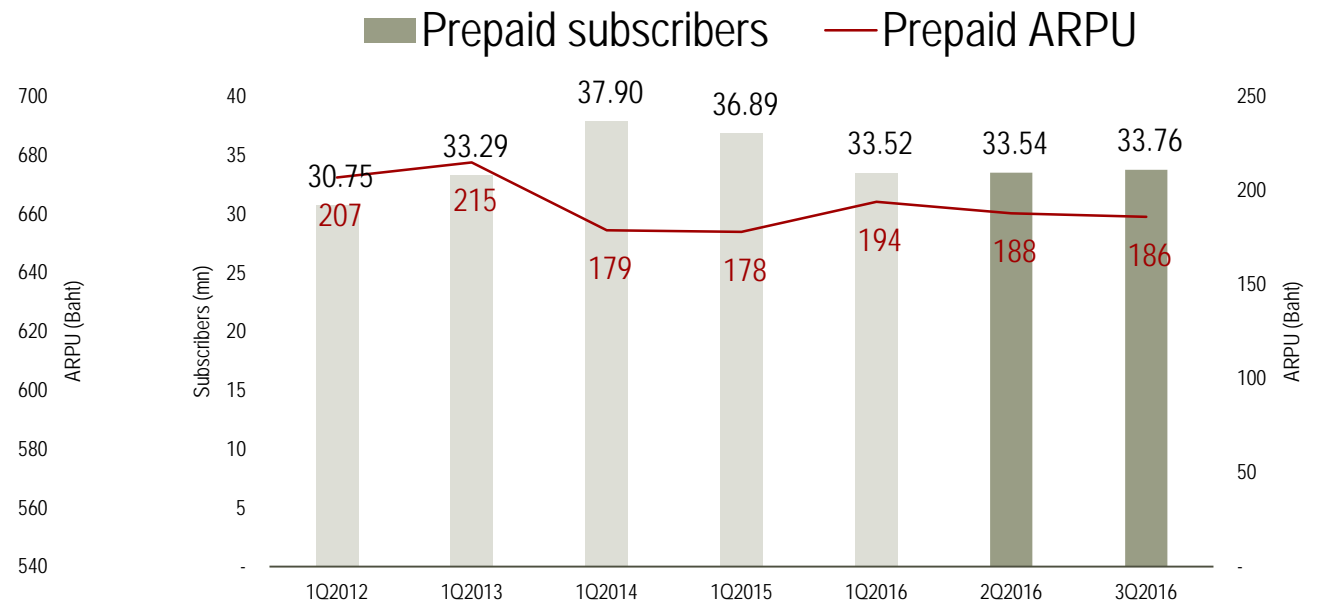
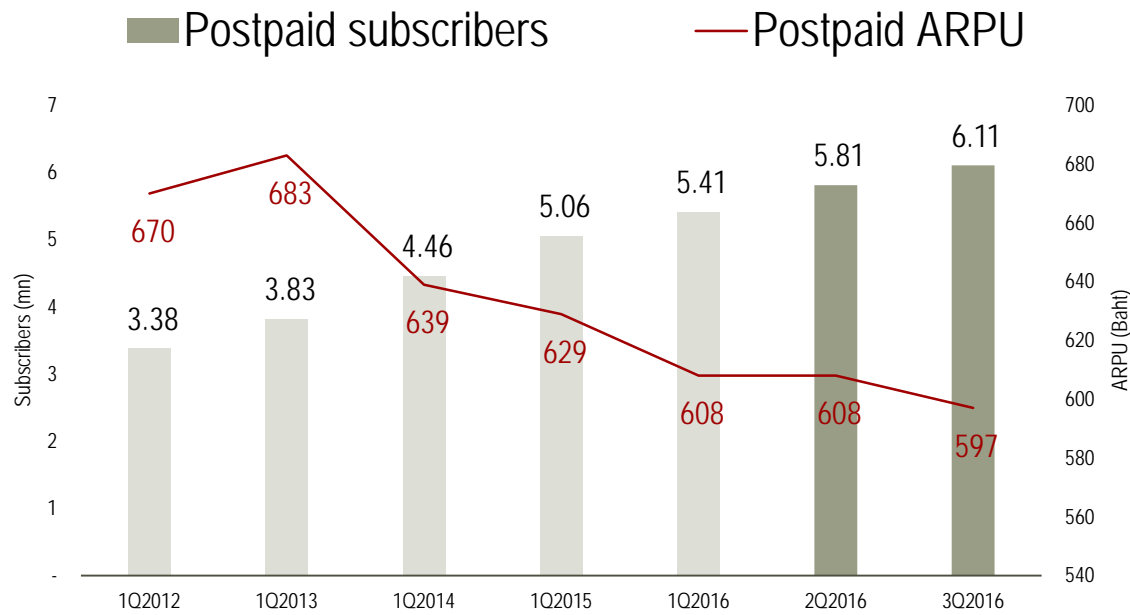
X

Operating Assets
Operating Capital
1.28x

For 2015, AIS continued to pay out 100% of net profit as dividends. Heavy investment in capex and licences has however greatly reduced cash flow available for funding dividends

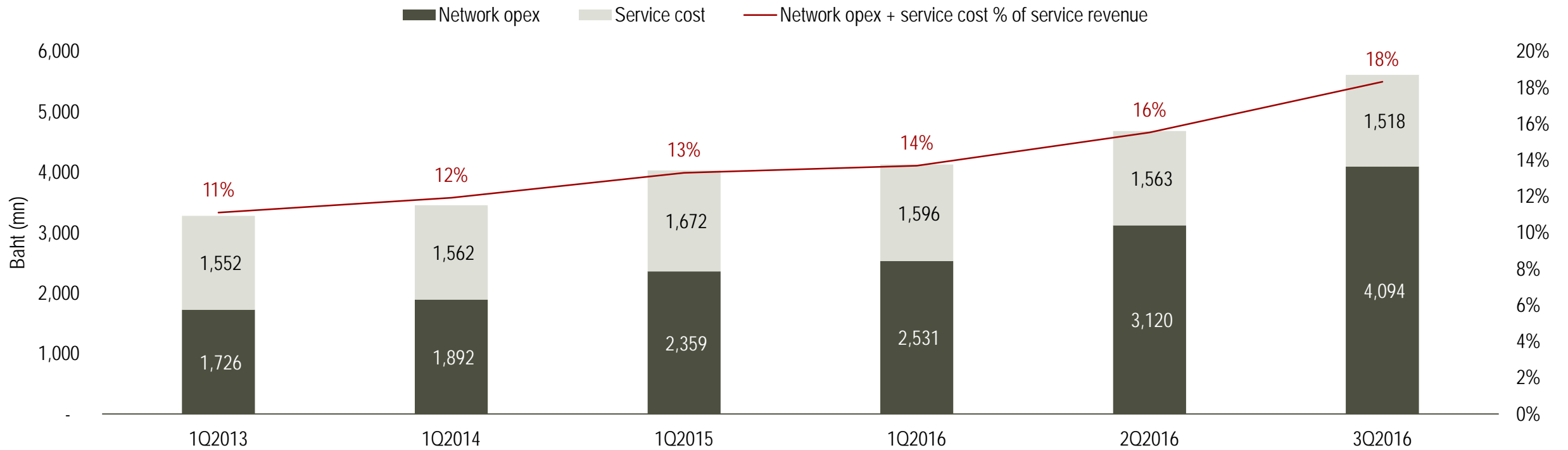
- AIS maintained its dividend policy in FY2015; declared dividend payout of 100% of net profit (12.99 baht/share or 39bn baht)
- Dividend payout was greater than FCF generated as AIS invested heavily in Capex and Licenses





Service revenue

Postpaid subscribers has grown strongly from 3.38mn in 1Q12 to 5.41mn in 1Q16 (+60%). This is a positive development as postpaid subscribers' ARPU is 3X of prepaid subscribers. Consequently, postpaid revenue has increased from Baht 6.8bn to Baht 9.9bn (+46%), driving overall service revenue (+13%).



Network opex has increased driven by 3G and 4G network expansion (higher rental, utilities and network equipment costs)

Network opex for 3Q16 included Baht 1.4bn in payments for concession towers and equipment to TOT

Network opex and other service costs

Network opex and other service costs has escalated in recent years—in absolute terms and as a percentage of service revenue—driven by 3G and 4G network expansion.

Depreciation & amortisation / Baht (mn) / Quarterly basis

Depreciation & amortisation

1Q2012	1Q2013	1Q2014	1Q2015	1Q2016	2Q2016	3Q2016
	yoy	yoy	yoy	yoy	qoq	qoq

3,836	4,224	5,375	3,978	4,403	6,156
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Bt4,403mn, declining by 19% YoY, due to the fully-amortized 2G assets under BTO contract offset by increasing investment. QoQ (3G and 4G network expansion)

The high network investments in 3Q16 resulted in D&A increase QoQ.

"Last question on D&A. I think you may look at it separately and not looking at the year-on-year trend. So in D&A, if you take the amortization of free licenses out, the rest would be mainly the network depreciation, and that one should follow our CapEx investment each year. So whenever we make a conservative cash outflow of CapEx, you may take the average useful life of around seven to eight years." – 3Q2016 Earnings Call Transcript

**Deprecn & amortisn
= Baht 28bn p.a.**

Depreciation : ~ Baht 20bn
(Cumulative depreciation of Baht 140bn from 2012 to 2016 depreciated over seven years)

+

Amortisation : ~ Baht 8bn
(Three licenses amortised over 15-18 years)

Handset margin / Baht (mn) / Quarterly basis

Sales revenue
 Cost of sales
 Handset subsidy / (Profit)
 Handset margin

1Q2012	1Q2013	1Q2014	1Q2015	1Q2016	2Q2016	3Q2016
	yoy	yoy	yoy	yoy	qoq	qoq
5,152	5,646	8,288	5,663	4,882	5,064	
(4,746)	(5,514)	(7,967)	(5,680)	(4,768)	(5,878)	
406	132	321	(17)	114	(814)	
8%	2%	4%	0%	2%	-16%	

Following zero handset margin strategy to push 3G device adoption, sales margin declined to 2.3% from 7.9% in 1Q13.

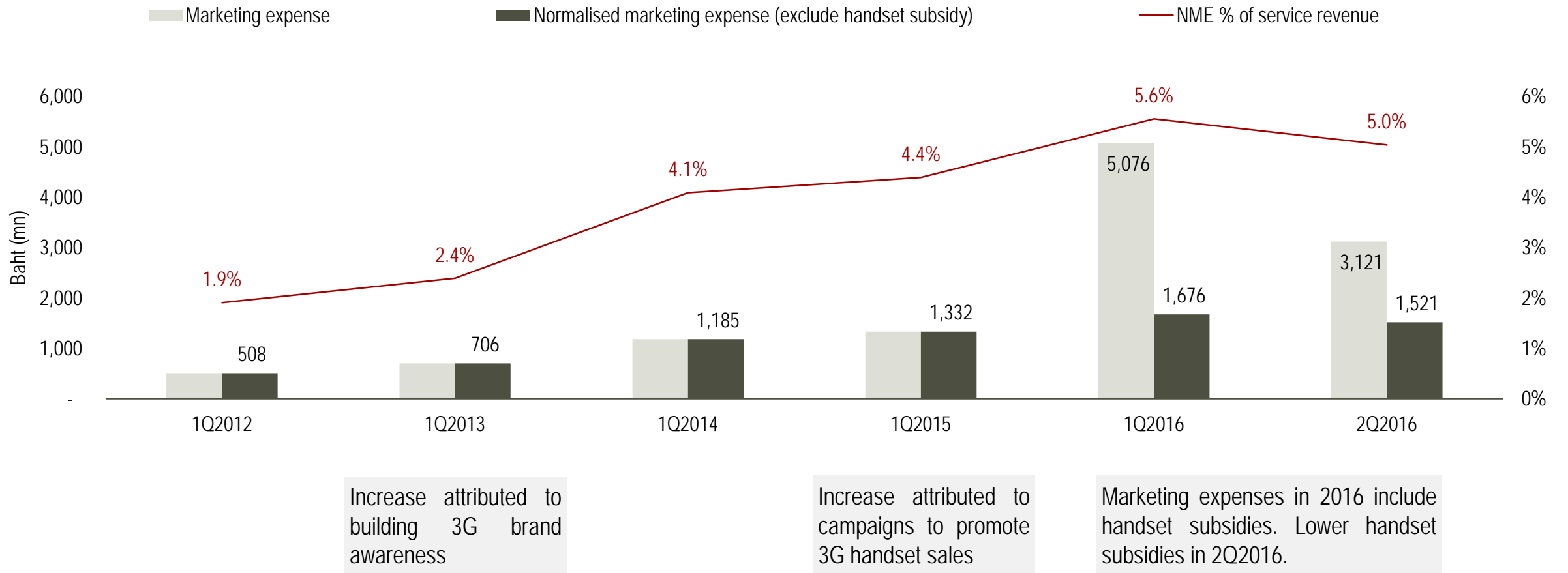
In 1Q15, the sales margin stood at 3.9% compared to 2.3% in 1Q14 with support from iPhone6 sales and AIS LAVA sales with margin.

Aggressive handset campaigns in the market → AIS' campaigns with discount caused a handset margin of -0.3%

Competition in handset offerings to acquire and retain customers caused margin to become negative at -16%

Handset margin

Amidst intensifying competition, handset margin has downtrend into negative territory.



Marketing expense

Marketing expense has escalated in recent years—in absolute terms and as a percentage of service revenue—amidst intensifying competition and sales promotions.

Admin, Bad debt, Dep / Baht (mn) / Quarterly basis

Administrative expenses

Bad debt expenses

Depreciation

Admin & Bad debt & Dep

Administrative expenses % of service revenue

Bad debt expenses % of service revenue

Depreciation % of service revenue

Admin & Bad debt & Dep % of service revenue

1Q2012	1Q2013	1Q2014	1Q2015	1Q2016	2Q2016	3Q2016
	yoy	yoy	yoy	yoy	qoq	qoq

2,068	2,501	2,933	2,640	2,917	2,976
193	257	331	284	320	350
55	62	81	96	101	106
2,316	2,820	3,345	3,020	3,338	3,432
7%	9%	10%	9%	10%	10%
0.7%	0.9%	1.1%	0.9%	1.1%	1.1%
0.2%	0.2%	0.3%	0.3%	0.3%	0.3%
8%	10%	11%	10%	11%	11%

Higher headcount

Higher staff cost

3.1% postpaid revenue

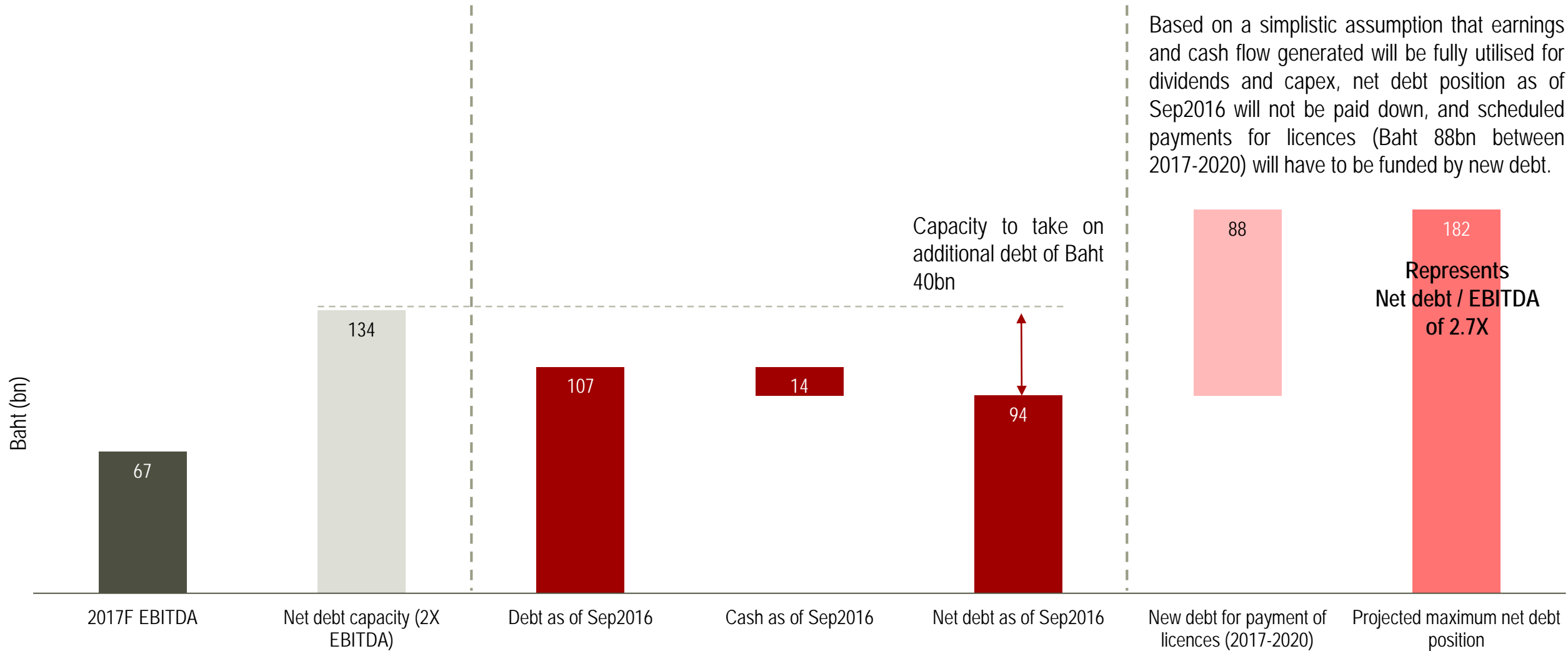
3.8% postpaid revenue

3.3% postpaid revenue

Expansion of distribution channels

Admin, Bad debt, Depreciation

As AIS rolled out 3G and 4G networks, a corresponding increase in business scale has driven up staff costs and depreciation.



Int expense
= Baht 3-6bn p.a.

- Assuming cost of debt at 3% p.a.
- Debt of Baht 107bn will incur interest expense of Baht 3bn p.a.
- Debt of Baht 182bn will incur interest expense of Baht 6bn p.a.

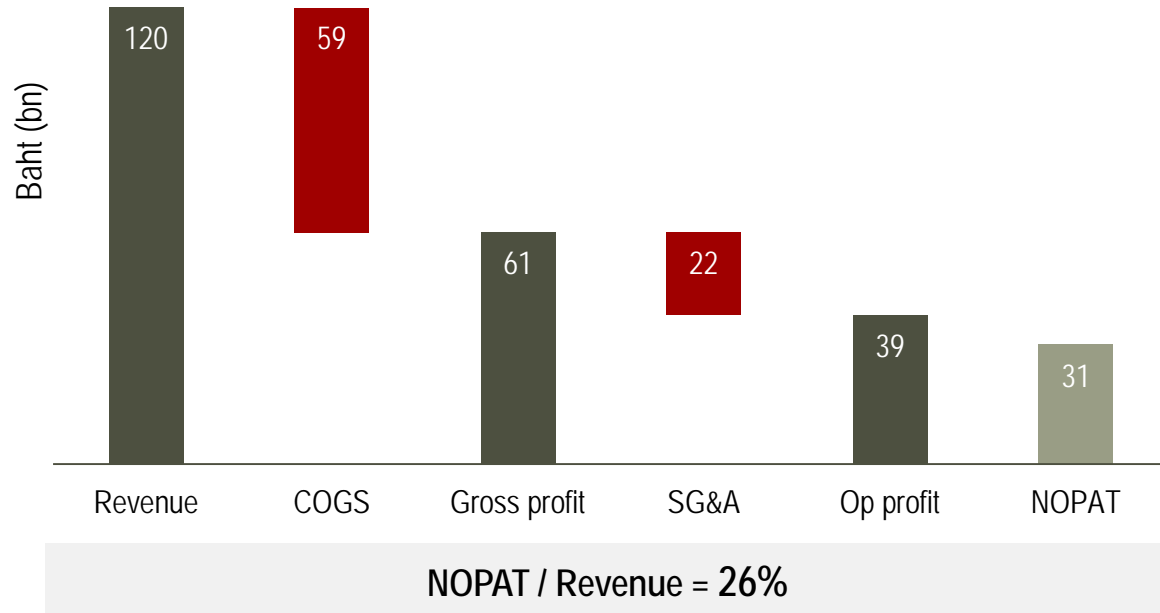
P&L / Baht (bn) / YE Dec	2017F	Assumptions
Prepaid revenue	75	Flattish (+0%). Growth in data usage mitigated by prepaid-to-postpaid migration.
Postpaid revenue	45	Flattish (+2%) : Slowing prepaid-to-postpaid migration. Declining ARPU as postpaid segment includes more low/mid-tier subscribers.
Service revenue (excludes IC)	120	Fixed broadband contribution is small and thus not considered here.
Network opex & other service costs	24	20% of service revenue. Expect higher costs from continued rollout of fixed broadband and 4G networks. 18% in 3Q16.
Depreciation	20	Cumulative depreciation of Baht 140bn from 2012 to 2016 depreciated over seven years.
Amortisn of licences	8	2100MHz = 14.6bn baht for 15-yr + 1800MHz = 41.0bn baht for 18-yr + 900MHz = 68.0bn baht for 15-yr
Regulatory fee	6	5.25% of service revenue under new license regime. 5.8% in 3Q16.
Handset margin	1	About 1bn baht in 9M2016.
Cost of service	59	
Marketing expense	7	6% of service revenue, providing for promotion of bundling services. 5% in 2Q16.
Admin	12	About 3bn baht in 3Q2016.
Depreciation	1	About 100mn baht in 3Q2016.
Bad debt	2	3.3% postpaid revenue in 3Q2016.
SG&A	22	
Operating profit	39	
Interest expense	6	Ranges from 3bn baht to 6bn baht p.a.
PBT	33	
Tax	7	Corporate tax rate of 20%
PAT	26	

Base Case

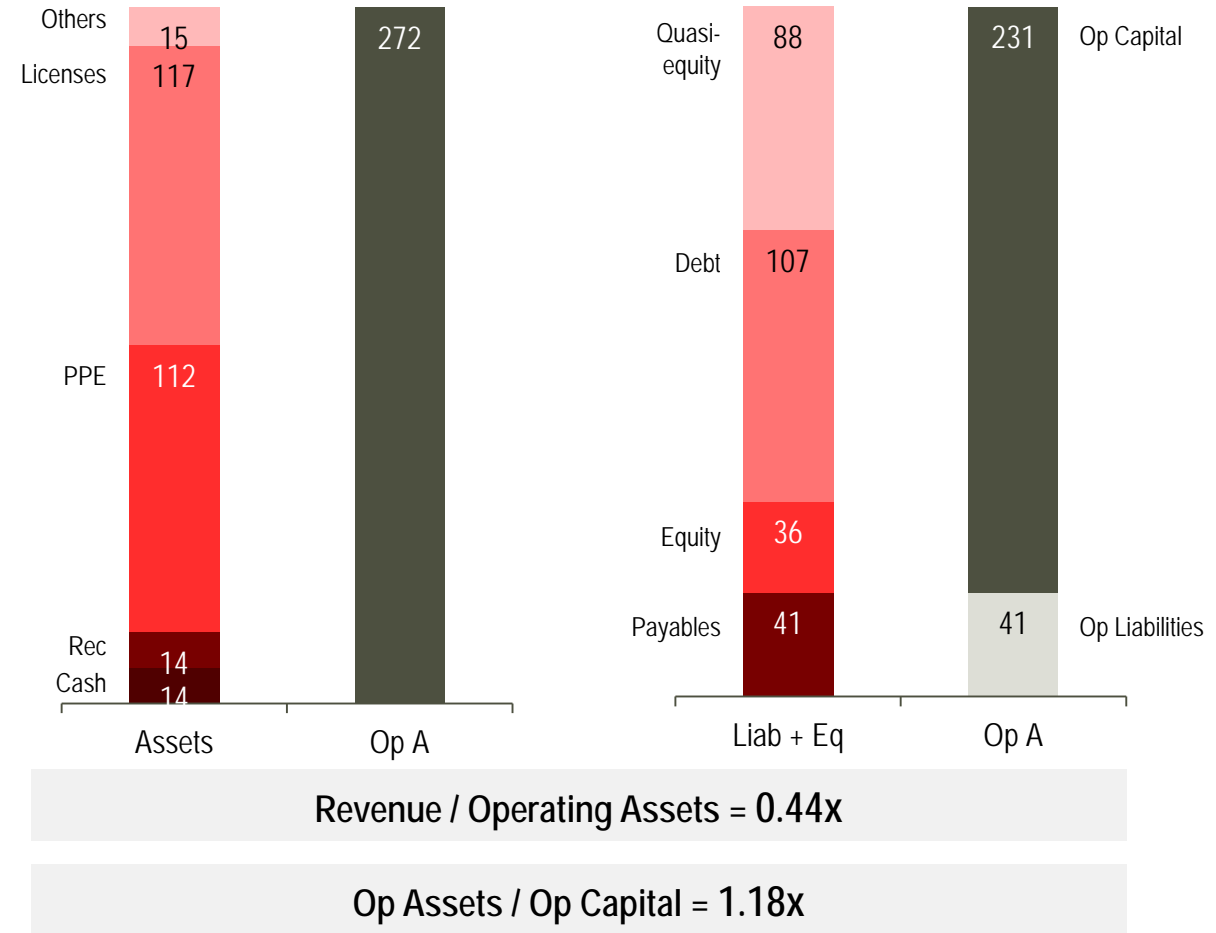
2017F net profit = Baht 26.6bn

Net profit forecasted for 2017 is Baht 26.6bn, representing a 33% decrease compared with Baht 39bn in 2015. Underlying 2017F is the assumption that the competitive environment will persist and operators' competitive behaviours will negatively impact revenue growth and operating expenses.

Earnings (2017F)



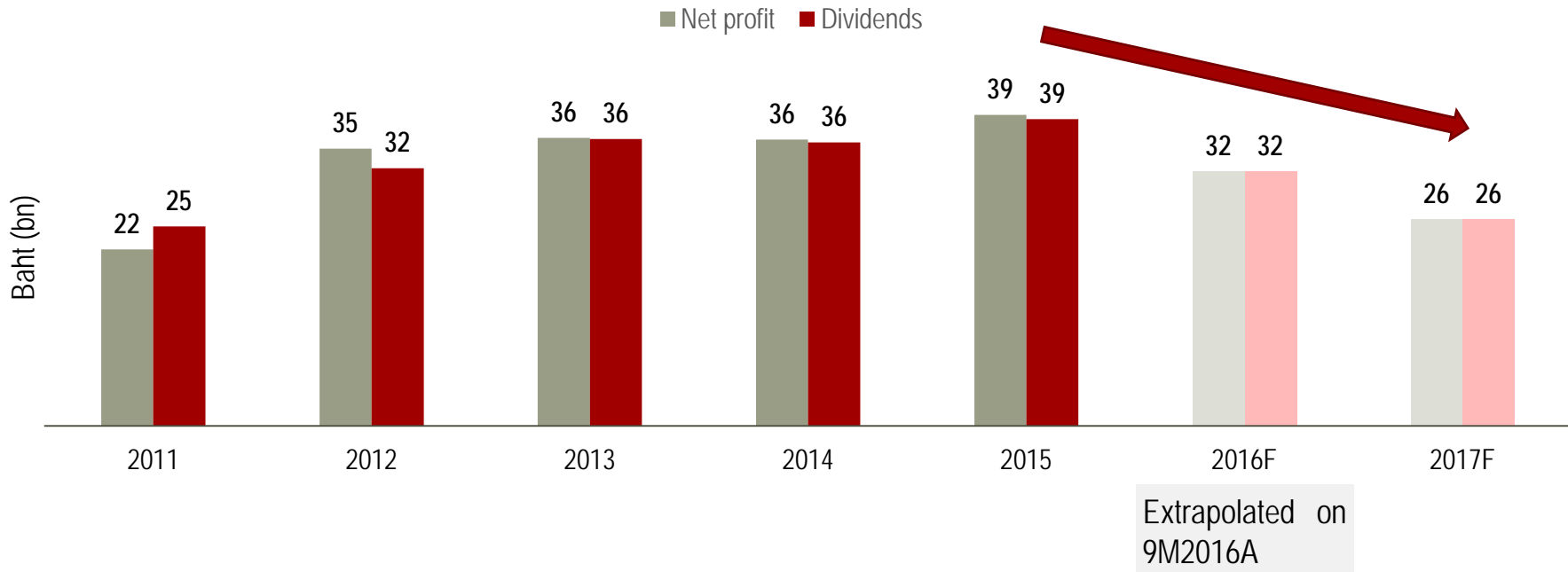
Operating Capital (Sep2016)



2017F ROIC = 13%

2017F ROIC of 13% is about half of 2015A ROIC of 28%. The sharp decrease is due to higher investment in Operating Assets, specifically in Licences and PPE. The key point is: aggressive competitive bidding for spectrum licences and the high prices paid have greatly reduced AIS and the industry's profitability.

Compared with historical earnings, 2017F net profit of Baht 26.6bn is a conservative estimate.



Baht per share

Historical dividend in 5 consecutive years is as follows:

Historical Dividend	2011	2012	2013	2014	2015
Total Dividend Payment (Baht per share)	8.43	10.90	12.15	12.00	12.99
1. Interim Dividend	4.17	5.90	6.40	6.04	6.50
2. Annual Dividend	4.26	5.00	5.75	5.96	6.49
3. Special Dividend	-	-	-	-	-
Dividend Payout Ratio	113%	93%	99.58%	99.01%	98.64%

Optimistic Case

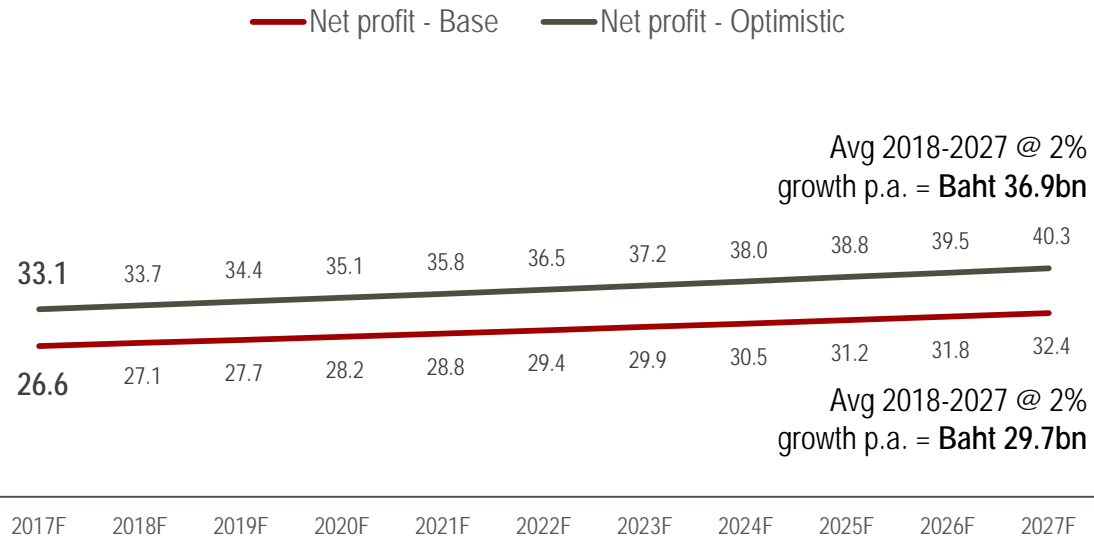
Slight positive variations to some assumptions raise 2017F net profit from Baht 26.6bn to Baht 33.1bn.

P&L / Baht (mn) / Ye Dec	2017F	Positive Sensitivities / Variations
Prepaid revenue	75,363	
Postpaid revenue	44,638	
Service revenue	120,001	
Network opex & other service costs	21,600	Reduce from 20% (of service revenue) to 18%. Increase depreciation life from 7 to 8 years.
Deprecn	17,500	
Amortisn of 2100MHz	973	
Amortisn of 1800MHz	2,278	
Amortisn of 900MHz	4,533	
Regulatory fee	6,300	
Handset margin	1,000	
Cost of service	54,185	
Gross profit	65,816	
Marketing expense	6,000.04	Reduce from 6% (of service revenue) to 5%.
Admin	12,000	
Depreciation	1,000	
Bad debt	1,473	
SG&A	20,473	
Operating profit	45,343	
Interest expense	4,000	Reduce from Baht 6bn to Baht 4bn.
PBT	41,343	
Tax	8,269	
PAT	33,074	

- As AIS's dividend policy is to pay out 100% of net profit as dividends, and cash flow generated for funding dividends should be in line with net profit level, assume dividend payout / dividend yield to equate net profit / earnings yield.

- Net profit for 2017 is forecasted to range from Baht 26.6bn (Base) to Baht 33.1bn (Optimistic).

- Assuming net profit to grow at 2% p.a. over the next 10 years (2018 – 2027), 10-year average net profit would range from Baht 29.7bn to Baht 36.9bn



		10-Yr Avg Net Profit (bn Baht)				
		Base - 0%g	Base - 2%g	Optim - 0%g	Optim - 2%g	
		26.6	29.7	33.1	36.9	
Share Price (Baht)	30%	195	4.6%	5.1%	5.7%	6.4%
	20%	180	5.0%	5.6%	6.2%	6.9%
	10%	165	5.4%	6.1%	6.7%	7.5%
	0%	150	6.0%	6.7%	7.4%	8.3%
	-10%	135	6.6%	7.4%	8.2%	9.2%
	-20%	120	7.5%	8.3%	9.3%	10.4%
-30%	105	8.5%	9.5%	10.6%	11.8%	

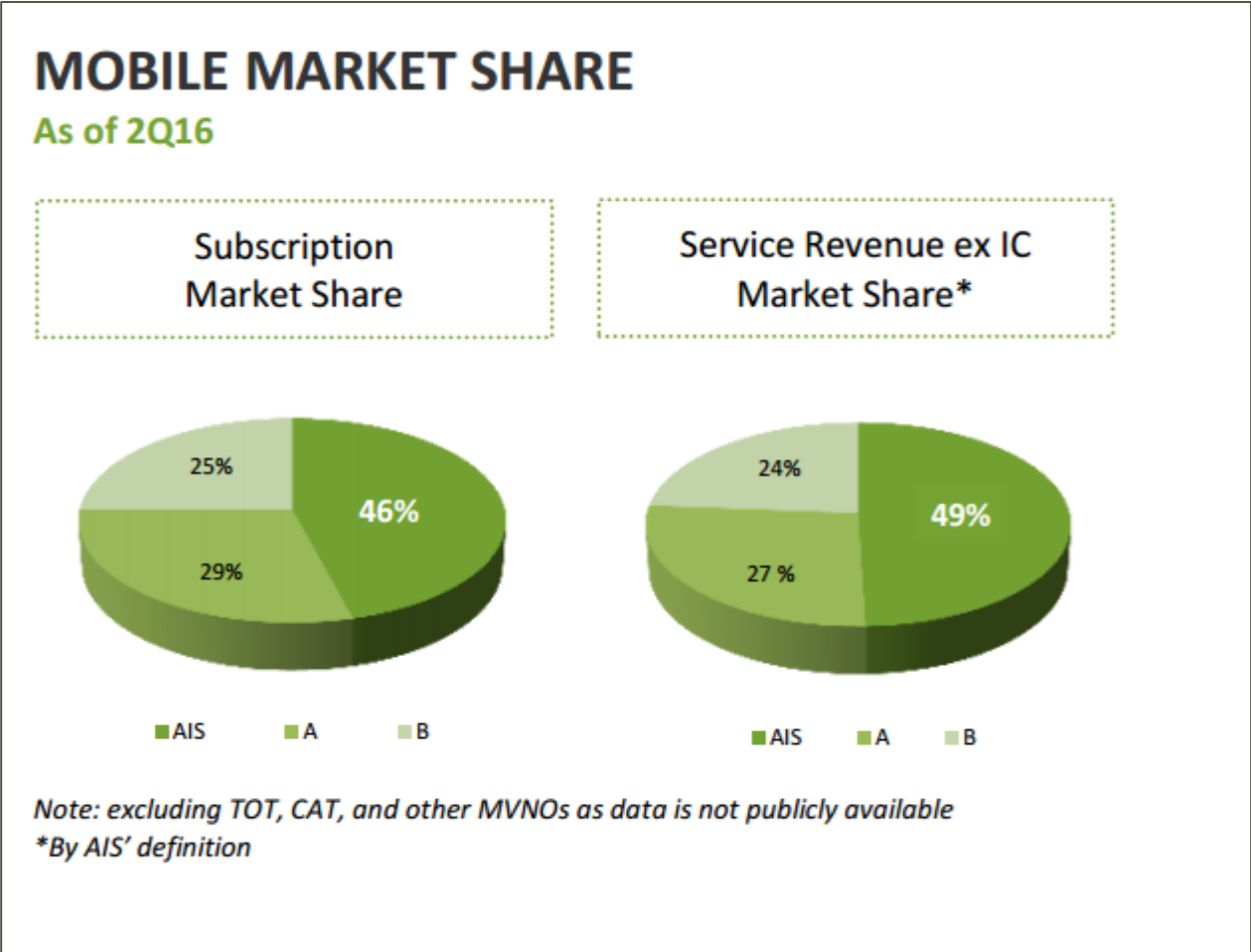
Margin of safety zone : > 9%

Safe entry price :
About Baht 135

Based on earnings yield target of 9%, a safe entry price would be about Baht 135.

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AIS, 2Q2016

Competition in the fixed broadband market can expect more intensity as AIS moves aggressively to establish its presence. Jasmine, meanwhile, wants to boost its broadband sales after forfeiting its first payment for a 4G wireless broadband licence it won in December.

"We aim to become the No.2 broadband player by 2019, overtaking 3BB broadband," said Saran Phaloprakarn, AIS's senior vice-president for fixed broadband business management.

True now has 2.5 million broadband subscribers, followed by Triple T Broadband with 2 million and TOT Plc with more than 1 million. There are 6.5 million fixed broadband subscribers in Thailand out of 20 million households.

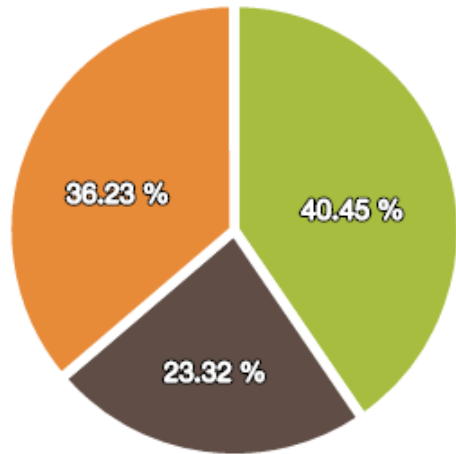
Of the total, 5 million are customers use ADSL, a technology that enables data transmission over copper telephone lines. The remaining 1.5 million are using a fibre optic network with a higher transmission rate than traditional copper-based broadband.

SingTel's effective stake in AIS = 31.81%

- Through Intouch Holdings = 21% x 40.45% = 8.49%
- Direct = 23.32%

Temasek's effective stake in AIS = 7.89%

- Through Intouch Holdings = 19.5% x 40.45% = 7.89%



■ Intouch Holdings Public Company Limited

■ Singtel Strategic Investments Pte Ltd.

■ Others (Free float)

Remarks

* Foreign Limit 48.30%

Top 10 Shareholders

as of 18 August 2016

Rank	Name	No. of Share	(%)
1.	INTOUCH HOLDINGS PUBLIC COMPANY LIMITED	1,202,712,000	40.45
2.	SINGTEL STRATEGIC INVESTMENTS PTE LTD. , SINGTEL INVESED BY OCBC NOMINEES	693,359,000	23.32
3.	THAI NVDR COMPANY LIMITED	178,170,309	5.99
4.	THE BANK OF NEW YORK MELLON	56,890,400	1.91
5.	สำนักงานประกันสังคม	46,667,300	1.57