

## Hoang Anh Gia Lai (HAG)

Becoming a Natural Resources Conglomerate

BUY – Price target: VND 120,000

Hoang Anh Gia Lai (HAGL) is undergoing a transformation from being a property developer to a natural resources conglomerate. Currently, HAGL has 20 real estate development projects underway, with a combined floorspace of 2.7m m<sup>2</sup>. The cash flow from these projects is being channelled into iron ore mines, rubber plantations, and hydropower dams. In this way, the volatile and short-term cash flow from property development is being turned into the long-term and steady cash flow from natural resources.

HAGL's property development business is impressive. It has completed six developments since 2006 with a total floorspace of 435,000m<sup>2</sup>. Five of these were condominiums catering to Vietnam's rising middle class. It currently has 20 projects underway scheduled for completion from 2011 to 2015, 19 of which are condominiums with 15,133 residential units. Its projects are priced competitively, as HAGL acquired its land bank years earlier, it performs its own construction work, and it even supplies building materials such as timber and granite tiles.

The roughly US\$1 billion in cash flow from these projects is being used to fund the development of its five rubber plantations with a total area of 51,000ha, its iron ore mines with 60 million tons of reserves, and its 17 hydropower projects due for completion by 2015. When its rubber plantations are at full production in 2020, HAGL will be generating net profits of roughly VND12tn annually without any contribution from real estate.

In order to provide better clarity about each of its businesses, HAGL plans to list its real estate, mining, hydropower and rubber subsidiaries and transform itself into a holding company. The real estate subsidiary is likely to be listed in 2011.

Based on our analysis, HAGL's shares are extremely cheap. They trade on a PER of roughly 11x for 2011 and 2012, but only 5x for 2013. Moreover, because its cash flow from real estate is so good, its debt levels never become excessive despite all of the investments it is making. We initiate with a buy recommendation and a 12-month target price of VND120,000, or 8.5x FY2013 earnings.

	2009	2010F	2011F	2012F	2013F
Revenues (VND tn)	4.4	5.2	7.8	10.4	16.6
Gross profit (VND tn)	2.0	2.6	3.9	4.8	8.2
Net profit (VND tn)	1.3	1.4	2.1	2.6	4.9
EPS (VND)	4,432	4,657	6,587	6,945	14,179
EPS growth (%)	69.5	5.1	41.4	5.4	104.2
ROE (%)	27.7	22.2	23.8	24.2	35.5
ROA (%)	12.2	10.7	12.6	13.1	20.9
BPS (VND)	17,502	25,664	32,250	39,195	53,375
PER (x)	17.4	16.5	11.7	11.1	5.4
PBR (x)	4.4	3.0	2.4	2.0	1.4
Dividend (VND)	1,500	1,000	1,000	1,000	1,000
Dividend yield (%)	2.0	1.3	1.3	1.3	1.3

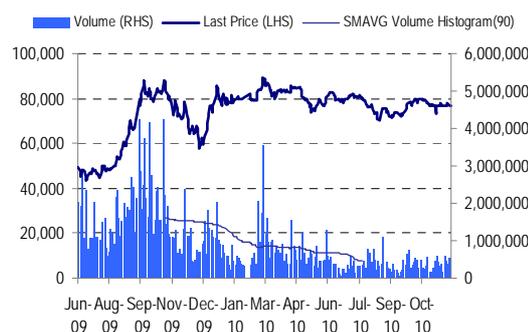
### Coverage initiation

Recommendation	BUY
	<b>HOSE: HAG</b>
	<b>Real Estate</b>
Price (VND)	76,500
Price Target (VND)	120,000
Expected share price return (%)	57%
Expected dividend yield (%)	1.3%
<b>Expected total return (%)</b>	<b>58%</b>

Source: Bloomberg, Mekong Securities

### Stock performance (%)

	YTD	1m	3m	6m
Abs	-2%	-1%	3%	-1%
Rel	7%	0%	5%	8%



### Ownership structure

Doan Nguyen Duc	50.1%
Korea Inv Trust	2.4%
Vietnam Dragon Fund	1.3%
Van Eck Associates	1.2%

### Stock statistics 9 Dec 2010

Bloomberg code	HAG
Last price (VND)	76,500
52-week range (VND)	57,000 – 90,500
Shares O/S (m)	292.5
Mkt Cap (VND bn)	22,378
Mkt Cap (USD bn)	1.06
Est. free float (m shrs)	146
3m avg daily vol / val	314k / \$1.1m
VND/USD	19,500 / 21,200
Index: VNIndex/HNX	453 / 111

Source: Bloomberg

## Overview

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HAGL began as a small furniture workshop in 1993 in Gia Lai Province (the company's name is a combination of the founder's daughter's name Hoang Anh plus Gia Lai). Following its initial success with school desks, it diversified its product line-up to include indoor and outdoor furniture and granite wall tiles. Today, it sells its products both domestically and overseas.

Like many successful Asian companies, HAGL moved from its core business into real estate development, starting with resorts in 2004, luxury apartments in 2006, and offices in 2007. The company's strategy in real estate has been to be vertically integrated: producing its own building materials (wood panels and granite tiles) and doing its own construction work. It estimates that this gives it 30% lower construction costs. It has completed six real estate development projects so far, and has another 20 in various stages of completion.

Rather than remaining focused on real estate as its core business (and running the risks of the inevitable downturns) HAGL is now in the process of using the profits generated by its real estate business to invest in natural resource businesses. These businesses include iron ore mining, rubber plantations, and hydropower dams. Unlike property development, where a project can last 2-3 years, these businesses are all long-term and provide relatively stable cash flows. HAGL has been able to acquire the land for its rubber trees, mining concessions, and sites for dams because of its good reputation and strong financial standing.

By 2015, HAGL will have completed its 20 announced real estate projects, planted and started to produce rubber on its 51,000ha of plantations, be able to mine 2.5 million tons of iron ore annually, and started to produce power at its 19 dams boasting 420m Mw of capacity.

## Financial Strategy

HAGL plans to grow its five core businesses as separate entities, and have each one list so as to be able to independently tap the capital markets. These businesses are real estate, rubber, minerals, hydropower and furniture/granite (which will stay within the parent company). The listing process will occur in two phases: first a 10% stake will be sold to a strategic investor, and second a 20% stake will be sold through an IPO. Already HAGL sold 11,75% of the chartered capital of its real estate business to strategic investors in July 2010, and plans to list in 2Q2011. It would like to find strategic investors for its mining business in early 2011 and then IPO this in 2012. In the following two years, it plans to do the same for hydropower and for rubber.

Yet, our analysis shows that even without the IPO of its subsidiaries, HAGL does not face financial stress despite its aggressive investment plan. This is because its current real estate projects will generate over US\$1 billion in cash flow in the next five years, more than sufficient to finance its dams and plantations.

## Real Estate: Hoang Anh House

Hoang Anh House is the real estate development and construction business of HAG. The company has completed six projects to date and has another 20 projects in various stages of development.

Figure 1: The recently completed New Saigon apartments



Source: HAGL

HAGL owns a substantial landbank in Ho Chi Minh City, Da Nang, Gia Lai, and Dak Lak and Can Tho, acquired years earlier at relatively low prices. Because it builds its own apartments and also can supply construction materials such as timber and granite, it can control its construction costs and capture much of the value of the project. With construction costs of approximately VND5.2 million/m<sup>2</sup> for projects priced over US\$1,000 per m<sup>2</sup>, and VND4.6 million/m<sup>2</sup> for the projects priced under \$1,000, gross profit margins are over 50%.

Figure 2: Completed Real Estate Projects

Name	Location	Land area (m <sup>2</sup> )	GFA (m <sup>2</sup> )	NLA (m <sup>2</sup> )	# Units	Completed
Le Van Lương Apartment	HCMC	8148	63,955	52,858	450	2006
Hoang Van Thu Apartment	Gia Lai	1356	21,284	14,639	157	2008
Tran Xuan Soan Apartment	HCM	8525	80,526	63,869	463	2008
Dam sinh thai Apartment	BinhDinh	10800	84,706	58,635	560	2008
New Saigon Apartment	HCMC	25567	176,685	139,012	1,104	2009
Thanh Thai Office	HCMC	1000	8,359	6,200		2010

Source: HAGL, Mekong Securities

Currently, HAG has six projects which began construction in 2009 or earlier, and started construction on an additional five in 2010. Three more projects will start construction in 2011. Except for the Kinh Te Office Building, started in 2010, all of its developments are large residential buildings. Its projects target the middle market, with prices ranging from VND16m to VND24m per m<sup>2</sup> (US\$800 to \$1200/m<sup>2</sup>).

Figure 3: Summary of HAGL's 20 ongoing property projects

	Start Date	Land area (m-2)	GFA (m-2)	NLA (m-2)	(Comm) (m-2)	Residential Units (No)	Unit Size (m-2)	Land Cost (VND bn)	Construction Cost (VND bn)	Const. Cost/m-2 (VND m)	Estimated Sales (VND bn)	Sales Price/m-2 (VND m)	HAG owns (%)
Phu Hoang Anh (phase 1)	2008	23,810	134,840	97,640	4,096	802	117	138	742	5.5	2,268	23.23	94%
Hoang Anh Riverview	2008	16,230	122,877	100,502	1,459	576	172	330	676	5.5	2,337	23.26	100%
Hoang Anh Can Tho	2008	3,754	29,391	25,347	0	216	117	26	122	4.2	220	8.67	51%
An Tien Golden House	2009	39,574	198,145	141,782	18,626	996	124	313	912	4.6	2,552	18.00	88%
Bau Thac Gian - Da Nang	2009	5,515	73,836	56,096	8,912	456	103	33	340	4.6	799	14.25	100%
Hoang Anh Bangkok	2009	5,042	13,928	11,620	0	140	83	27	72	5.2	221	19.00	47%
Phu Hoang Anh (phase 2)	2010	24,111	127,078	96,559	2,497	648	145	114	661	5.2	2,293	23.75	94%
Hoang Anh Incomex	2010	12,679	98,014	79,219	24,300	396	139	62	510	5.2	1,656	20.90	80%
Kinh Te office building	2010	17,000	165,022	121,422	6,840	0	-	607	858	5.2	3,230	26.60	100%
Thanh Binh	2010	17,797	127,128	101,702	0	1,000	102	640	661	5.2	2,705	26.60	100%
No Trang Long	2010	3,202	30,793	24,616	0	256	96	100	160	5.2	585	23.75	51%
Phuc Bao Minh	2011	9,920	65,520	55,692		474	117	231	301	4.6	899	16.15	98%
Minh Tuan	2011	82,000	317,657	270,008	0	2,000	135	309	1,461	4.6	4,361	16.15	71%
Hoc Mon	2011	24,000	137,274	105,174	0	1,308	80	73	631	4.6	1,599	15.20	50%
Phu Dinh	2012	18,486	212,598	175,626	0	895	196	454	1,106	5.2	3,671	20.90	51%
Phan Van Khoe	2012	4,123	61,851	53,605	16,292	250	149	178	322	5.2	1,222	22.80	51%
Hiep Binh Phuoc	2013	352,275	460,000	368,000	0	2,300	160	1100	2,116	4.6	5,943	16.15	100%
Tan Phong	2013	28,127	168,762	135,010	0	1,120	121	190	878	5.2	3,848	28.50	45%
2-9 Da Nang	2013	20,000	140,000	112,000	0	1,100	102	280	728	5.2	2,128	19.00	100%
Nga Ba Hue - Da Nang	2013	3,448	24,133	19,307	0	200	97	48	111	4.6	275	14.25	100%
<b>Total</b>		<b>711,093</b>	<b>2,708,847</b>	<b>2,150,927</b>		<b>15,133</b>		<b>5,252</b>	<b>13,367</b>		<b>42,812</b>		

Source: HAGL, Mekong Securities

### Revenues and costs

We use HAGL's projections of sales and costs of its 20 projects to determine the sales and earnings outlook for the real estate division. In HAGL's construction cost estimates, capitalized interest expenses are included. Meanwhile, sales costs are insignificant. Some of its projects include commercial space; this is for sale and included in the GFA and NLA figures.

As can be seen from figure 4, sales peak in 2013, as we have not factored in any additional real estate projects after announced ones are completed. It is quite likely, however, that HAGL will continue to launch projects on its extensive landbank. Its operating profits peak in 2013 as well although they are given a boost in 2015 by two large projects to be completed then. In aggregate, these projects will generate operating profits of VND22.5tn, net profits of VND15.9tn, and net profits to HAGL shareholders (after minority interests are factored out) of VND12.3tn.

Because HAGL has already paid for most of its land, the cash flow from these projects after tax will amount to VND19.7tn, or US\$1 bn.

Figure 4: HAGL real estate sales projections

<b>Revenues (VND bn)</b>						
<b>Project</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Phu Hoang Anh (phase 1)	709	382				
Hoang Anh Riverview	1,112	59				
Hoang Anh Can Tho	131	7				
An Tien Golden House	978	880	98			
Bau Thac Gian - Da Nang	240	400	160			
Hoang Anh Bangkok		110	99	11		
Phu Hoang Anh (phase 2)		688	688	459	459	
Hoang Anh Incomex		497	497	331	331	
Kinh Te office building				3,230		
Thanh Binh		812	812	541	541	
No Trang Long		146	175	175	88	
Phuc Bao Minh		270	270	270	90	
Minh Tuan			872	872	1,090	1,526
Hoc Mon			320	320	400	560
Phu Dinh			918	918	918	918
Phan Van Khoe			306	306	306	306
Hiep Binh Phuoc				891	2,080	2,972
Tan Phong				770	1,154	1,924
2-9 Da Nang				319	745	1,064
Nga Ba Hue - Da Nang				41	96	138
<b>Total</b>	<b>3,169</b>	<b>4,249</b>	<b>5,214</b>	<b>9,453</b>	<b>8,297</b>	<b>9,406</b>

Source: HAGL, Mekong Securities

Figure 5: HAGL's real estate profit projections

<b>OP (VND bn)</b>						
<b>Project</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Phu Hoang Anh (phase 1)	420	226				
Hoang Anh Riverview	713	38				
Hoang Anh Can Tho	65	3				
An Tien Golden House	490	441	49			
Bau Thac Gian - Da Nang	128	213	85			
Hoang Anh Bangkok		61	55	6		
Phu Hoang Anh (phase 2)		455	455	304	304	
Hoang Anh Incomex		325	325	217	217	
Kinh Te office building				1,764		
Thanh Binh		421	421	281	281	
No Trang Long		81	97	97	49	
Phuc Bao Minh		110	110	110	37	
Minh Tuan			518	518	648	907
Hoc Mon			179	179	224	313
Phu Dinh			528	528	528	528
Phan Van Khoe			181	181	181	181
Hiep Binh Phuoc				409	955	1,364
Tan Phong				556	834	1,390
2-9 Da Nang				168	392	560
Nga Ba Hue - Da Nang				17	41	58
<b>Total</b>	<b>1,816</b>	<b>2,375</b>	<b>3,004</b>	<b>5,335</b>	<b>4,688</b>	<b>5,300</b>

Source: HAGL, Mekong Securities

### Rubber Plantations

HAGL has 51,000 hectares of land in the Central Highlands of Vietnam, Laos and Cambodia, provided under long-term leases by the respective governments, for production of rubber. The governments were willing to supply so much land because they are targeting job creation and taxes. HAGL only needs to pay an annual lease fee of \$10-15 per hectare. One worker is required for every three hectares of rubber plantation, so eventually the plantations will employ 17,000 workers.

Though remaining positive about the long-term outlook of tra/basa sector (some say strong recovery from late 2011 onwards), many industry insiders are concerned about the sector's current difficulties such as i) the volatility of raw material supply -- a long-standing issue in this sector, ii) rising trade barriers (e.g. Russia market has recently required lowering the glaze weight down to under 10% from 20%; or US's Farm Bill, if adopted, would cause substantial challenges for many tra/basa exporters to meet the stricter requirements on fish farming, and iii) on-going austerity in the European zone slowing down recovery in tra/basa demand. Additionally, due to the depreciation of Euro against US dollars, European importers are requesting Vietnamese exporters to reduce the selling price, and importers in other regions also take advantage of this to bargain down the price.

Figure 6: Rubber nursery garden



Source: HAGL

Planting of rubber trees began in 2007 when 1,500ha were planted. In 2008, HAGL planted another 4,000ha and then in 2009 6,500. The plan is to plant the remaining hectares by 2012 and to start production in 2012. An investment of about \$5,000 per hectare over six years is required to grow a rubber plantation.

Figure 7: Rubber Plantations

Plantation	Area (ha)	Planted end 2009	Total planted end 2010e	To be planted
Gia Lai, Vietnam	8,000	3,500	5,500	2,500
Dak Lak, Vietnam	3,000	0	1,000	2,000
Laos	25,000	8,500	15,500	9,500
Cambodia	15,000	0	2,000	13,000
Total	51,000	12,000	24,000	27,000

Source: HAGL, Mekong Securities

#### It takes time to grow rubber

HAGL is planting 550 trees per hectare, and they forecast a rubber latex yield per hectare of 2.5 tons (or 4.5kg per tree), which is above Vietnam's average output. They credit this to the fact that they are planting new high yield varieties of rubber trees imported from Thailand and Malaysia.

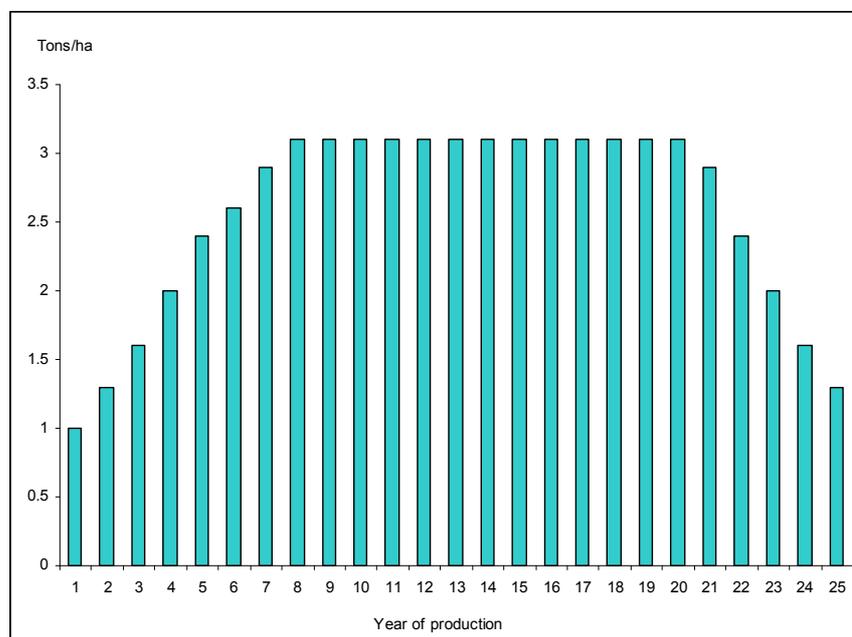
Production costs are extremely low, as the trees are only fertilized during the first two years. Farmers, who harvest the rubber over the nine month production season, are only paid VND100,000 per day. HAGL estimates the total unit cost of production to be \$700 per ton, which includes harvesting, depreciation, processing and protection care. Dry latex currently sells for over \$3,000 per ton.

The output will be sold as dry latex as the production technology is simple. This type of rubber is used in tires and mattresses. Liquid latex, used in making higher quality products such as gloves, requires more advanced technology.

Normally, the rubber tree has to grow for seven years from the time it is planted before it begins to produce, but if the land is fertile it can start producing in five or six years.

HAGL estimates first year production of one ton per hectare, gradually rising to a peak of 3.1 tons hectare in year 8. After 20 years production begins to fall off.

Figure 8: Annual rubber latex per hectare since start of production



Source: HAGL

Assuming that production of rubber proceeds as depicted above and their rubber trees mature quickly, then HAGL's annual rubber production will reach 139,400 tons by 2021, worth \$418m in sales assuming a price of \$3,000 per ton.

Figure 9: HAGL's rubber production, sales and profits

	New Planting (ha)	Total Planting (ha)	Total Producing (ha)	Total latex (tons)	Sales (\$m)	Rents (\$m)	Labor (\$m)	Prod Cost (\$m)	Total Costs (\$m)	OP (\$m)	Capex Planting (\$m)	Capitalized Costs
2007	1,500	1,500			-	7.7	0.6	-	8.28	(8.28)	3.0	3.0
2008	4,000	5,500			-	7.7	2.3	-	9.94	(9.94)	8.9	11.9
2009	6,500	12,000			-	7.7	5.0	-	12.65	(12.65)	16.3	28.2
2010	12,000	24,000			-	7.7	10.0	-	17.65	(17.65)	31.2	59.4
2011	13,000	37,000			-	7.7	15.4	-	23.07	(23.07)	40.4	99.8
2012	14,000	51,000	1,500	1,500	4.5	7.7	21.3	0.7	29.59	(25.09)	50.2	150.0
2013	-	51,000	5,500	5,950	17.9	7.7	21.3	2.7	31.64	(13.79)	29.7	179.7
2014	-	51,000	12,000	14,100	42.3	7.7	21.3	6.5	35.39	6.91	27.3	207.0
2015	-	51,000	24,000	29,850	89.6	7.7	21.3	13.7	42.63	46.92	23.4	230.4
2016	-	51,000	37,000	50,600	151.8	7.7	21.3	23.3	52.18	99.62	16.2	246.6
2017	-	51,000	51,000	76,600	229.8	7.7	21.3	35.2	64.14	165.66	8.4	255.0
2018	-	51,000	51,000	93,350	280.1	7.7	21.3	42.9	71.84	208.21	-	255.0
2019	-	51,000	51,000	110,350	331.1	7.7	21.3	50.8	79.66	251.39	-	255.0
2020	-	51,000	51,000	126,300	378.9	7.7	21.3	58.1	87.00	291.90	-	255.0
2021	-	51,000	51,000	139,400	418.2	7.7	21.3	64.1	93.02	325.18	-	255.0

Source: HAGL, Mekong Securities

### Selling the wood too

In addition, after the trees stop producing in 25 years, these 51,000 hectares of rubber trees will yield about 3 million m<sup>3</sup> of timber for wood processing with a value of roughly US\$750 million. After deducting operation, transportation and processing costs of about US\$320 million, the profit on this is about US\$430 million.

### Iron Ore Mining

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HAGL owns iron ore mines in Vietnam, Laos and Cambodia. The total estimated reserves of its mines is 60 million tons, with 20m tons in Laos, 30m tons in Cambodia and 10m tons in Vietnam. These mines were not exploited until now because continuous warfare kept the geologists away. At a selling price of \$120/ton, these reserves will generate \$7.2bn in revenues.

Figure 10: Iron Ore Line



Source: HAGL

The mines are all open cast mines of high quality, with the surface layer having an iron ore concentration of 20% and the core layer at 60%. The production process is relatively simple: the ore is excavated and then sent to the iron ore line where it is crushed, sifted and refined. HAGL is now running five ore lines with an annual capacity each of 100,000 tons. Additional lines are now being installed to meet its production goal of 1m tons in 2011 and 1.5m tons in 2012. Production this year is estimated at 400,000 tons.

The total production costs of the iron ore are around \$43/ton. This figure includes the 10% natural resources tax, which is imposed on the price of unrefined ore. In addition, HAGL has to pay an export tax of 20% of the selling price of the refined ore.

Figure 11: HAGL's iron ore production plan

	Production (000 tons)	Reserves (m tons)	Revenues at \$120/t (\$ m)	Prod costs (\$ m)	Export taxes (\$ m)	Total Costs	Operating profit (\$ m)
2009	0	60	0	0	0	0	0
2010	400	59.6	48	17.2	9.6	26.8	21.2
2011	1000	58.6	120	43	24	67	53
2012	1500	57.1	180	64.5	36	100.5	79.5
2013	2000	55.1	240	86	48	134	106
2014	2500	52.6	300	107.5	60	167.5	132.5
2015	2500	50.1	300	107.5	60	167.5	132.5
2016	2500	47.6	300	107.5	60	167.5	132.5
2017	2500	45.1	300	107.5	60	167.5	132.5
2018	2500	42.6	300	107.5	60	167.5	132.5
2019	2500	40.1	300	107.5	60	167.5	132.5
2020	2500	37.6	300	107.5	60	167.5	132.5
2021	2500	35.1	300	107.5	60	167.5	132.5

## Hydropower

HAG Hydropower has 17 projects in Tay Nguyen, Thanh Hoa and Laos with a total potential capacity of 420 MW. The estimated investment to complete these 17 projects is VND 7,569 billion, a relatively high upfront cost, but once the hydropower plants start producing the running costs are just 2% of revenues.

Figure 12: HAGL's 17 hydropower projects

No.	Project	Location	Capacity (Mw)	Invest (VND bn)	Start	Complete
1	Ba Thuoc 1	Vietnam	60	1080	2009	2012
2	Ba Thuoc 2	Vietnam	80	1440	2009	2011
3	Daksrong 2	Vietnam	24	432	2008	2010
4	Daksrong 2A	Vietnam	18	324	2009	2010
5	Daksrong 3A	Vietnam	13.5	243	2010	2012
6	Daksrong 3B	Vietnam	19.5	351	2009	2012
7	Ia Drang 4	Vietnam	9	162	2012	2015
8	Ia Krel 2	Vietnam	7.5	135	2012	2015
9	Dak Lo 1	Vietnam	6	108	2012	2015
10	Dak Lo 2	Vietnam	6	108	2010	2012
11	Dak Lo 3	Vietnam	10	180	2011	2013
12	Dakpsi 2B	Vietnam	14	252	2009	2011
13	Dakpsi 2C	Vietnam	12	216	2012	2015
14	Buon Don	Vietnam	20	360	2010	2012
15	Buon Bra	Vietnam	11	198	2010	2012
16	Nam Kong 2	Laos	80	1440	2010	2013
17	Nam Kong 3	Laos	30	540	2011	2014
<b>Total</b>			<b>420.5</b>	<b>7569</b>		

Source: HAGL, Mekong Securities

HAGL estimates that the total power output of the 17 hydro projects will be about 1.92 billion kWh. This works out to an assumption that the projects run at peak output for 4,571 hours annually, or 190 days. Based on current electricity prices of VND700/kWh, total annual revenues will be VND1,345bn, and generate an operating profit of around VND1,105bn or US\$50.8m.

Figure 13: HAGL's 17 hydropower projects' megawattage

	2011 (Mw)	2012 (Mw)	2013 (Mw)	2014 (Mw)	2015 (Mw)	2016 (Mw)
Ba Thuoc 1			60	60	60	60
Ba Thuoc 2		80	80	80	80	80
Daksrong 2	24	24	24	24	24	24
Daksrong 2A	18	18	18	18	18	18
Daksrong 3A			13.5	13.5	13.5	13.5
Daksrong 3B			19.5	19.5	19.5	19.5
Ia Drang 4						9
Ia Krel 2						7.5
Dak Lo 1						6
Dak Lo 2			6	6	6	6
Dak Lo 3				10	10	10
Dakpsi 2B		14	14	14	14	14
Dakpsi 2C						12
Buon Don			20	20	20	20
Buon Bra			11	11	11	11
Nam Kong 2				80	80	80
Nam Kong 3					30	30
<b>Total</b>	<b>42</b>	<b>136</b>	<b>266</b>	<b>356</b>	<b>386</b>	<b>420.5</b>

Source: HAGL, Mekong Securities

Figure 14: Hydropower dam under construction



Source: HAGL

Figure 15: HAGL's 17 hydropower projects' operating financials

	Capacity (Mw)	Output bnKw-H 4571	Revenues VND700/kwH (VNDbn)	Dep (VNDbn)	OpExp	Total CGS	OP (VNDbn)	OP (\$m)
2009	0	-	-					
2010	0	-	-					
2011	42	0.19	134	30	2.7	32.9	101.5	5.1
2012	136	0.62	435	98	8.7	106.6	328.5	16.4
2013	266	1.22	851	192	17.0	208.5	642.6	32.1
2014	356	1.63	1,139	256	22.8	279.1	860.0	43.0
2015	386	1.76	1,235	278	24.7	302.6	932.5	46.6
2016	420.5	1.92	1,345	303	26.9	329.7	1,015.8	50.8
2017	420.5	1.92	1,345	303	26.9	329.7	1,015.8	50.8
2018	420.5	1.92	1,345	303	26.9	329.7	1,015.8	50.8
2019	420.5	1.92	1,345	303	26.9	329.7	1,015.8	50.8
2020	420.5	1.92	1,345	303	26.9	329.7	1,015.8	50.8
2021	420.5	1.92	1,345	303	26.9	329.7	1,015.8	50.8

Source: HAGL, Mekong Securities

### Wooden furniture and granite business

HAGL has five wood factories and one granite factory. It also owns several quarries and timber amounting to 300,000 m<sup>3</sup> in southern Laos. This timber was supplied by the Lao government from land cleared for HAG's rubber plantations in repayment of a \$15m loan by HAG.

HAG manufactures wooden indoor and outdoor furniture, with the indoor furniture for the domestic market and the outdoor furniture for export. HAGL has also opened up five large furniture supercenters. Its granite tiles are not sold externally, but used in its building projects.

The annual sales of this business are only about \$30m, with a gross profit margin of 40%. HAG management does not intend to grow this business, and it will not be separately listed like the other divisions in the company.

## Earnings Projections

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Our earnings projections for HAGL are based on the following. First, HAGL's real estate, iron ore, rubber and hydropower projects generate revenues on management's schedule. Second, we have assumed constant prices and current VND exchange rates. Third, HAGL does not initiate any new real estate projects. Were it to do so, then the cash balance at HAGL would decline but future earnings would be higher. Fourth, SG&A costs are a constant percentage of revenues.

We projected out our earnings forecast to 2020, because it is only then that sales and profits from its important rubber operations plateau. By 2020, EPS will have grown to VND32,187 and to BPS VND212,194.

Surprisingly, despite all of its investments, the debt levels at HAGL never become very onerous. In fact, based on our analysis, the company becomes debt free in 2014! Of course, this conclusion rests on the ability of HAGL to construct its apartments as per schedule, and then sell them. But even if there were delays in the real estate business, HAGL could still afford to complete its other businesses using some debt.

Figure 16: HAGL earnings model

Income Statement (VND bn)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Revenues	1,881	4,365	5,180	7,848	10,432	16,583	17,429	19,652	11,670	13,294	14,405	15,543	16,637
Sales of apartments	1,231	3,374	3,169	4,249	5,214	9,453	8,297	9,406	-	-	-	-	-
Sales of goods	435	539	603	651	704	760	821	886	957	1,034	1,116	1,206	1,302
Construction contracts	106	319	335	352	370	388	407	428	449	472	495	520	546
Rendering of services	108	134	160	181	205	231	262	296	334	377	426	482	545
Sale of rubber	-	-	-	-	86	339	804	1,701	2,884	4,366	5,321	6,290	7,199
Sale of iron ore	-	-	912	2,280	3,420	4,560	5,700	5,700	5,700	5,700	5,700	5,700	5,700
Sale of electricity	-	-	-	134	435	851	1,139	1,235	1,345	1,345	1,345	1,345	1,345
CGS	991	2,359	2,608	3,987	5,661	8,420	8,769	9,513	5,710	6,041	6,301	6,573	6,849
Cost of apartments	485	1,681	1,353	1,874	2,210	4,118	3,609	4,106	-	-	-	-	-
Cost of goods sold	348	384	428	462	499	539	583	629	680	734	793	856	925
Construction contracts	63	171	180	189	199	208	219	230	241	253	266	279	293
Services rendered	94	121	137	155	175	198	224	253	286	323	365	412	466
Cost of rubber	-	-	-	-	562	601	672	810	991	1,219	1,365	1,514	1,653
Cost of iron ore	-	-	509	1,273	1,910	2,546	3,183	3,183	3,183	3,183	3,183	3,183	3,183
Cost of electricity	-	-	-	33	107	209	279	303	330	330	330	330	330
Gross profits	890	2,007	2,572	3,861	4,771	8,163	8,661	10,139	5,960	7,253	8,104	8,970	9,788
SG&A	200	271	321	487	647	1,028	1,081	1,218	724	824	893	964	1,032
Financial income	439	199	252	168	168	168	264	589	1,315	2,073	2,642	3,298	4,044
Financial expenses	96	213	482	525	585	504	209	-	-	-	-	-	-
OP	1,032	1,722	2,021	3,018	3,707	6,799	7,635	9,510	6,551	8,502	9,852	11,304	12,801
Non-operating income	(26)	22	747	24	25	26	28	29	31	32	34	35	37
PBT	1,006	1,744	2,768	3,042	3,732	6,825	7,663	9,539	6,581	8,534	9,886	11,339	12,838
Taxes	241	457	692	760	933	1,706	1,916	2,385	1,645	2,134	2,472	2,835	3,210
Net profit	765	1,287	2,076	2,281	2,799	5,119	5,747	7,154	4,936	6,401	7,415	8,505	9,629
Minority interests	65	98	82	172	569	752	889	1,142	-	-	-	-	-
Attributable to common	700	1,189	1,994	2,110	2,230	4,367	4,858	6,012	4,936	6,401	7,415	8,505	9,629
Dividends	267.8	402.4	439	439	439	439	461	1,229	1,536	1,843	2,150	2,458	2,765
Shares outstanding (m)	268	268	293	293	293	293	307	307	307	307	307	307	307
EPS	2,615	4,432	6,816	7,212	7,625	14,930	15,814	19,570	16,069	20,837	24,137	27,685	31,344
DPS	1000	1500	1500	1500	1500	1500	1500	4,000	5,000	6,000	7,000	8,000	9,000
BPS	13,925	17,502	27,823	35,035	42,660	57,590	74,235	93,805	109,874	130,711	154,848	182,533	213,878

<b>Balance Sheet(VND bn)</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Cash and equivalents	531	2,102	2,102	2,102	2,102	2,102	4,488	10,231	22,633	29,196	36,848	45,606	55,494
Accounts receivable	1,985	2,956	2,644	3,185	3,667	5,787	5,209	5,763	1,060	1,060	1,060	1,060	1,060
From sale of apartment	270	1,541	1,584	2,125	2,607	4,727	4,149	4,703	-	-	-	-	-
Inventories	1,852	2,213	2,139	2,680	3,162	5,282	4,704	5,258	555	555	555	555	555
Apartments under const.	1,487	1,806	1,584	2,125	2,607	4,727	4,149	4,703	-	-	-	-	-
Other current assets	157	132	139	146	153	161	169	178	186	196	206	216	227
Fixed assets	1,870	2,517	3,263	3,025	2,658	1,353	1,142	41	41	41	41	41	41
Long-term investments	2,091	2,061	4,391	6,938	9,263	10,538	11,347	11,947	12,254	12,414	12,414	12,414	12,414
Other long-term assets	386	214	235	259	285	313	344	379	417	459	504	555	610
<b>Total assets</b>	<b>8,872</b>	<b>12,196</b>	<b>14,914</b>	<b>18,335</b>	<b>21,290</b>	<b>25,535</b>	<b>27,402</b>	<b>33,796</b>	<b>37,147</b>	<b>43,920</b>	<b>51,628</b>	<b>60,447</b>	<b>70,401</b>
ST bank loans	1,203	1,542	2,237	2,750	3,193	3,830	-	-	-	-	-	-	-
Convertible bonds	-	1,450	1,100	1,100	1,100	1,100	-	-	-	-	-	-	-
Trade payable	374	198	217	332	472	702	731	793	476	503	525	548	571
Accrued expenses	368	645	652	997	1,415	2,105	2,192	2,378	1,428	1,510	1,575	1,643	1,712
Long-term debt	1,894	2,249	1,387	1,706	1,354	(619)	-	-	-	-	-	-	-
Deferred taxes	235	499	277	304	373	683	766	954	658	853	989	1,134	1,284
Others	599	486	525	567	613	662	715	772	833	900	972	1,050	1,134
<b>Total Liabilities</b>	<b>4,672</b>	<b>7,069</b>	<b>6,395</b>	<b>7,756</b>	<b>8,521</b>	<b>8,462</b>	<b>4,404</b>	<b>4,897</b>	<b>3,395</b>	<b>3,767</b>	<b>4,061</b>	<b>4,375</b>	<b>4,701</b>
Minorities	452	416	380	330	290	227	194	84	-	-	-	-	-
<b>Common equity</b>	<b>3,729</b>	<b>4,695</b>	<b>8,139</b>	<b>10,248</b>	<b>12,479</b>	<b>16,846</b>	<b>22,804</b>	<b>28,816</b>	<b>33,752</b>	<b>40,153</b>	<b>47,567</b>	<b>56,072</b>	<b>65,701</b>

Source: HAG, Mekong Securities

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